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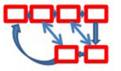
International Association of Labour Inspection

Helle Tosine
Nils-Petter Wedege

Measuring Performance of the Occupational Safety and Health Function

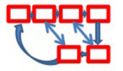
A Handbook for Labour Inspectorates





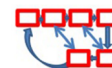
“...to build and foster foundations for effective labour inspection across the globe depends on the capacity of labour inspection systems to be able to demonstrate their value through measuring effectiveness. Meeting this challenge is a key strategy to influence and promote safe, healthy and decent work outcomes as well as sustainable economic development...”

**Michele Patterson, President, IALI
International ILO Conference
Dusseldorf, November 2009**

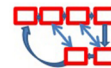


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FOREWORD

The growing demand for measuring effectiveness of public service programs is largely based on the realisation by the public and by governments that undertaking and reporting on good activities is not enough.

For labour inspectorates, even if their programs and projects are well-managed, the inspectorate needs to show that there is a discernible improvement in the lives of workers as a result of their programs. It is for this reason that the International Association of Labour Inspection (IALI) has put a priority on developing a handbook on how to measure the results, or the performance, of labour inspectorates' work in relation to occupational safety and health.

To support the labour inspectorates who want to implement such a system, IALI set itself three goals in the development of this handbook. The handbook needs to:

- 1 **Be simple and user-friendly.** The handbook needs to be a useful tool for labour inspectorates in all levels of economies. Whether a developing economy, or a well established economy, it is hoped that this handbook can be used in flexible ways that ultimately enhance the development of the effectiveness of the labour inspectorate as a whole.
- 2 **Apply measurement concepts to labour inspectorates.** Much has been written on the subject of performance measurement for the private sector. However, the world of public services has its own challenges. This handbook needed to propose a performance measurement framework, taken from best practices, making it useful for labour inspectorates.
- 3 **Include learning from IALI countries.** Many countries are already working through performance measurement. By including case studies from countries that are in the various stages of implementing performance measurement into this handbook, it supports capacity building, learning, knowledge transfer and the development of an IALI network.

It is hoped that if labour inspectorates use this handbook, learning will be shared among IALI members and that performance measurement for labour inspectorates will evolve.

It is important to underscore that its introduction represents a key step forward for IALI.

Furthermore, the handbook is designed to help IALI members meet the challenge of choosing the right things to measure to get the right results, testing the performance measurement framework, and demonstrating how and why change happens where it matters most — in improving the lives of workers.



EXECUTIVE SUMMARY

Performance measurement in the public sector is based on the realisation by the public and by governments that activity reporting is not enough. This type of reporting does not show if a government department is moving towards achieving its vision, goals or objectives.

Today, governments are being asked to report on outcomes – “*what results can the public service achieve that will benefit society?*”

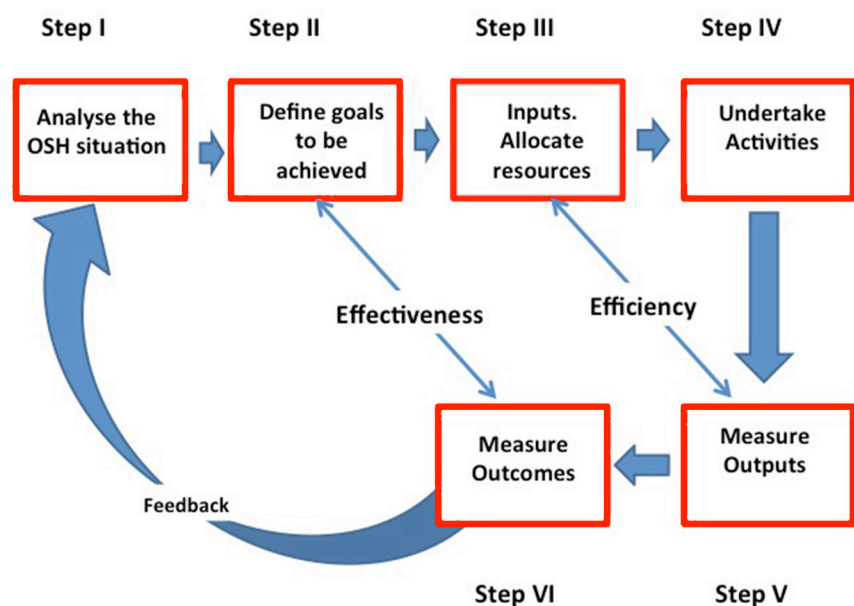
Even if a labour inspectorate’s programs, projects and activities are well-managed, the inspectorate needs to show that there is an outcome of improvement in the lives of workers as a result of an inspectorate’s efforts.

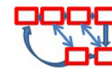
Without applying a systematic monitoring and measurement approach, it is not possible to evaluate if the work of labour inspectorates is aimed in the right direction, whether progress and success can be claimed, and how future activities might be improved.

This handbook provides a practical approach on how to measure the performance of a labour inspectorate’s occupational safety and health (OSH) function.

The handbook proposes, and explains how to use, a six-step methodology for measuring achievement towards the outcome of improved health and safety in workplaces:

To what extent does OSH improve as a result of a Labour Inspectorate’s (LI) activities?





Step I: Analyse the OSH situation – This comprises two steps:

- (a) Define the problem – what is the issue the labour inspectorate needs to address? What has to change so OSH can improve?
- (b) Establish a baseline – of data to serve as a starting point for measurement and comparison.

Step II: Establish goal(s) – When undertaking performance measurement, the labour inspectorate needs to develop a clear, analytical understanding of its goal in support of the larger government vision. It needs to understand what it wants to measure and to develop a measuring method appropriate for its particular situation. The labour inspectorate's goal statement establishes a basis for measurement.

Step III: Allocate resources (inputs) – For example, staff, budget and equipment.

Step IV: Undertake activities – Activities are developed to fulfil the labour inspectorate's statutory obligations, as well as to deliver any goals or vision in support of this. Risk assessment, or risk-based targeting of activities, has become best practice among labour inspectorates.

Step V: Measure outputs – The amount of activity undertaken by the labour inspectorate, e.g. number of inspections. The important consideration for the labour inspectorate is to measure the correct outputs as they relate to achievement of the outcomes and established goals of the labour inspectorate and the government.

Step VI: Measure outcomes – The degree of change against a defined problem as a result of a labour inspectorate's activities.

By applying these six steps, a labour inspectorate will have the necessary information to make decisions about how to refine or improve its effectiveness and efficiency and will be able to demonstrate how it can affect:

- **achievement of public policy:** the extent to which a labour inspectorate attains the objectives of public policy;
- **outcomes for workers:** the extent to which OSH and the worker's condition improve as a result of a labour inspectorate's activities;
- **outcomes for enterprises:** the extent to which labour inspectorate activities benefit the enterprise; and
- **outcomes for society:** the extent to which labour inspectorate activities contribute to increasing the standard of living at the national level.

The six-step approach has been developed from best practices and experiences of others. The handbook includes a glossary which explains the concepts of performance measurement in the context of occupational health and safety. It applies these concepts, describes the six-step framework and uses real examples provided by IALI labour inspectorates.

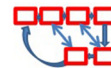
This is not a handbook on how to audit a labour inspectorate nor is it a handbook on how to manage the performance of staff in a labour inspectorate. Neither will this handbook provide the labour inspectorate with a ready-made or pre-packaged procedure for performance measurement. Labour inspectorates will need to adapt this six-step framework for their own OHS situation.

The detailed ten case studies provided by IALI member countries illustrate many of the concepts of performance measurement explained in the handbook. The countries who have provided their information have not used the exact framework outlined in the diagram, as these countries have been working on performance measurement for



many years at different levels prior to the development of this model. The performance measurement methods used by the different countries depend on their specific OSH situation, culture and on the availability of reliable statistics.

The case studies have been provided by: Austria, Australia (South Australia), Canada (Ontario), Denmark, Lithuania, the Netherlands, Norway, Singapore, Slovenia, and the United Kingdom.



ACKNOWLEDGEMENTS

The development of this handbook would not have been possible without the generous contribution of time and advice from the international advisors, from representatives from IALI countries who worked hard to collect case studies, and without the continual support and encouragement by the IALI Executive Committee.

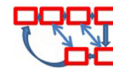
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A. International advisors for this handbook

- 1 Dr. Simon Clarke, Strategic Effectiveness Team, UK Health and Safety Executive, United Kingdom
- 2 Paul Huijzendveld, former Director General, Labour Inspector and Secretary General of IALI, the Netherlands
- 3 Wiking Husberg, former Senior OSH Specialist, ILO Moscow Office
- 4 Dr. Eleftheria Lehmann, Director, Landesinstitut für Gesundheit und Arbeit NRW, Germany
- 5 Dr. Cam Mustard, President and CEO, Institute for Work and Health, Ontario, Canada
- 6 Prof. Jorma Rantanen, former President of International Commission on Occupational Health (ICOH) and former Director General of the Finnish Institute of Occupational Health
- 7 Jukka Takala, former Director, SafeWork ILO and former Director of the OSH-EU Agency, Bilbao

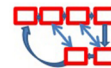
B. Executive Committee of the International Association of Labour Inspectors (IALI)

Ms Michele Patterson – President
Mr Kevin Myers – Secretary General
Mr Michel Gisler – Treasurer and Vice President
Mr Bernhard Brueckner – Vice President
Mr Andrey Selivanov – Vice President
Mrs Sylvie Siffermann – Vice President
Mr. Ho Siong Hin – Vice President
Mr. Paul Weber – Vice President
Ms Shi Yanping – Vice President
Mr Gerd Albracht – Technical Advisor
Mr Wolfgang Von Richthofen – Technical Advisor



C. Representatives from IALI countries who provided case studies

Austria	Dipl.-Ing. Josef Kerschhagl Dept. of Central Labour Inspection Federal Ministry of Labour, Social Affairs and Consumer Protection
Australia /South Australia	Dr Peter O'Connor, Chief Adviser, Performance and Data Strategic Interventions Group, SafeWork SA, Department of the Premier and Cabinet
Canada/Ontario	Dr Cam Mustard, President & Senior Scientist, Institute for Work & Health
Denmark	Per Lunde Jensen, Danish Working Authority
Lithuania	Vilius Maciulaitis, Republic of Lithuania State Labour Inspectorate
Netherlands	Jan Blok, the Netherlands Ministry of Social Affairs and Employment
Norway	Nils Petter Wedege, former Technical Advisor, IALI
Singapore	Alvian Tan, Senior Manager, WSH Leadership Development, Workplace Safety and Health Institute
Slovenia	Mladen Markota, Labour Inspectorate of the Republic of Slovenia
United Kingdom	Dr Simon Clarke, Strategic Effectiveness Team, Health and Safety Executive



THE AUTHORS



Nils-Petter Wedege

A physicist by training with a cand.real. degree in physics, mathematics and chemistry at the University of Oslo (1964). MBA at Reading University, England (1987).

He began his career as an editor at the Oslo University Press. From 1967 to 1977 he worked as an advisor and secretary to the board of the Norwegian Research Council for Science and Fine Arts and particularly engaged in environmental problems. Nils-Petter Wedege was, from 1977 till 1988, Deputy Director with the Norwegian State Pollution Control Authority and Director of Research with the Ministry of Environment. He was Director with the Department of Environmental Health in Oslo from 1988 to 1991 and then Deputy Director at the Norwegian Labour Inspectorate. He retired in 2006.

In 1974 he worked with the Natural Environmental Research council in the UK and with ILO (International Labour Office) in 2001. He lectured at the ILO International Training Centre in Torino for several years.

He was Norwegian delegate to SLIC (Senior Labour Inspectors Committee, EU) from 1992 to 2006 and also delegate to ILO's annual Work Congress.

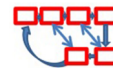
In 2005, Nils-Petter Wedege delivered "A comparative study on the organisation of OSH systems in the EU" as part of a project commissioned by the Turkish Government and financed by EU. In 2009 he finalised an ILO project called "Assessment of Labour Inspectorates Performance – in search for a simple tool".

Nils-Petter Wedege has been a member of national and international commissions/committees such as:

- Vice chairman of the Norwegian Commission on Major Accidents at Sea;
- Chairman of the Environmental Committee of the Norwegian Research Council for Science and Technology;
- Member of the Committee of Natural Sciences of the Norwegian Research Council for Science and fine Arts;
- Member of the boards of:
 - The Norwegian Research Institute for Occupational Safety and Health;
 - The Norwegian Work Research Institute;
 - The Norwegian Occupational Environmental Centre;
- Chairman of the Occupational Work Committee under the Nordic Council of Ministers.

Nils-Petter Wedege was elected Vice-President of IALI (International Association of Labour Inspection) from 1999 to 2005 and thereafter appointed as Technical Advisor to IALI. In particular, he has been working with the question on how to measure and evaluate the effectiveness of the activities of labour inspectorates. He has been invited as speaker to several international conferences.

In 2011 he was awarded the IALI president's medal for his assistance to IALI through 15 years.



Helle Tõsine

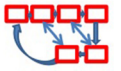
An analytical chemist with a post-graduate focus on toxic environmental chemical analysis from McMaster University and York University (Ontario, Canada). She began her career with the Canadian government, Environment Canada, in leading research on the impacts of toxic chemicals on the Great Lakes. Over her 30 year career in government, Helle has held several director positions in the environmental area, from establishing laboratories to analyse toxic organics, to leading research and technology development, and to developing legislation and regulations. She has co-authored over 40 peer review papers. In recognition for her environmental work, Helle was awarded the Chemical Institute of Canada award for outstanding contribution to the field of chemistry.

In 2008, Helle Tõsine retired from the position of Assistant Deputy Minister, Ontario Ministry of Labour, where she had led over 1000 staff and a budget of 95 M (Cdn\$) focused on enforcement of occupational health and safety, and employment rights. A key achievement was the development and implementation of a nationally and internationally unique initiative to reduce workplace injuries by 20% within 4 years, and save employers over 960 M (Cdn\$) in cost of claims. The results of this project exceeded its goals. This initiative – implementation of a regulatory risk management framework – was the first of its kind in Ontario. Helle led the development and implementation of an integrated risk management, performance measurement and evaluation methodology to measure Ontario's occupational health and safety system's outcomes, with over 14 safety partners.

Based on this work, in 2007, Helle chaired the IALI Conference, the first ever in North America. For her contribution to public service, Helle received Ontario's distinguished award for outstanding public service, The Amethyst Award.

Since 2008, Helle has been working in Canada and abroad as a senior consultant with SEG Management Consultants, where she provides consulting services focused in the regulatory areas of governance, operational transformation, development and implementation of public policy and legislation, and risk mitigation strategies, particularly in the area of occupational health and safety. Her clients have included the Government of Azerbaijan and the World Bank. As one of three international experts, Helle prepared a strategic and operational plan for the Ministry of Labour, State Labour Inspectorate (SLI), Government of Azerbaijan. She led the evaluation of the effectiveness and efficiency of the labour inspectorate, prepared short- and long-term initiatives to implement the strategic action plan based on risk management strategy, and recommended performance metrics. The project was well received by the World Bank, the Azeri government and the International Labour Organisation (ILO) and is being implemented.

Helle has contributed to the community through leading strategic planning and business transformation with not-for-profit organisations, in the area of education, seniors and worker safety. She has held positions on various boards and is currently a member of the Council of Governors, Royal Canadian Institute. For her voluntary contribution to Canada, Helle was awarded the Queen Elizabeth Diamond Jubilee Medal (2012).

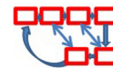


PART I

Measuring the performance of a labour inspectorate is essential to ensure the effectiveness of labour inspection activities. Without monitoring and measurement, it is not possible to evaluate if the work of labour inspectorates is aimed in the right direction, whether progress and success can be attributed, or how future activities might be improved.

PART I covers:

- ▶ **the purpose of the handbook;**
- ▶ **a short glossary of performance measurement terminology.**



Introduction

Many factors and many players influence improvements in occupational safety and health (OSH). Labour inspection is one of these and can play a key role in achieving improvements.

However, the difficult question to answer is:

To what extent does OSH improve as a result of a labour inspectorate's activities?

Many will claim that the answer is self-evident. Decision-makers as well as the public demand demonstration of success, but may not know which measurement methods and supporting data and/or information are appropriate or sufficient to evaluate performance. Labour inspection authorities need to demonstrate **efficient** use of their resources but our main concern in this book is the measurement of **effectiveness**.

In 2006, the ILO agreed that the ILO strategy for the modernisation and reinvigoration of labour needed to include tools for labour inspectorates:

“adapted from existing performance-measuring tools, such as the Scoreboard developed by the Nordic countries, or newly developed, to define labour inspection indicators, compare them with national practices, highlight trends and suggest measures to increase the inspectorates’ effectiveness and efficiency;”¹

In June 2011, the “**IALI Action Plan for the Future: 2011–2014 and Beyond**”², Action Area 1 set the following objective:

“to provide the professional foundation for building strong modernised and effective labour inspection worldwide”.

The ninth key outcome under Action Area 1 is:

“work on the tools for measuring the effectiveness of inspectorates is further developed, ultimately providing a means of benchmarking performance for those wishing to measure improvement”.

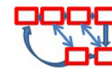
1.1 What is this handbook about?

This handbook provides guidance on how to measure the performance of labour inspectorates (LIs) in relation to their occupational safety and health (OSH) function. It is a response to the 2011–2014 IALI action plan and the ILO 2006 strategy.

The handbook is intended to underpin the efforts of professional labour inspection in working to achieve better OSH standards for workers. It is recognised that the role of labour inspectorates often extends beyond OSH to other workplace issues such as employment rights; however, this handbook is directed at performance measurement for the work undertaken by a labour inspectorate in relation to OSH.

1 INTERNATIONAL LABOUR OFFICE GB.297/ESP/3, 297th Session, Governing Body Geneva, November 2006. Committee on Employment and Social Policy ESP -- Strategies and practice for labour inspection

2 <http://www.iali-aiit.org/resources/action-plan-2011-2014.pdf>



This handbook focuses on the system of performance measurement and its logical components. It explains essential concepts of performance measurement and how these can be applied to labour inspectorates:

- ▶ It includes basic information about what is meant by performance measurement in general, and offers reasons for developing a performance measurement process for labour inspectorates.
- ▶ It will explain 'how to' measure the effectiveness of labour inspectorates and offer steps for each stage of this process recognising that performance measurement includes evaluating both effectiveness and efficiency.
- ▶ It offers a conceptual framework for labour inspectorates to use and a description, using examples, of the key components in developing such a process.
- ▶ It includes case studies of performance measurement strategies tried by labour inspectorates internationally.

1.2 What this handbook is not

This is not a handbook on how to audit a labour inspectorate. An excellent tool is available for auditing labour inspectorates, and it is described below. Nor is this a handbook on how to manage the performance of staff in a labour inspectorate.

It is also important to note that this handbook will not provide the labour inspectorate with a ready-made or pre-packaged procedure for performance measurement.

Auditing labour inspectorates

In its Programme for 2008–09, the ILO agreed to several actions to help reinvigorate and modernise labour inspection, one of which was a tool (an audit methodology) to help increase member countries' capacity to carry out labour inspection. The ILO labour inspection audit methodology³ gives a general description of how labour inspectorates should work and be organised.

The ILO labour inspection audit methodology is used to assess whether a national OSH system is in place. Undertaking such an audit will provide the specific country with recommendations for improving labour inspections. Further information in this regard can be found in the ILO Recommendation 197.⁴

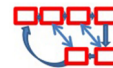
An audit system was also developed and implemented by the European Union Senior Labour Inspectors' Committee (SLIC) and is described in more detail in PART VII of this handbook. SLIC seeks to encourage consistent and effective enforcement of EU-based legislation against SLIC's "*Common Principles for Labour Inspectorates (LIs) regarding Inspection of Health and Safety at the Workplace*".

The "*Scoreboard*" as developed by the Nordic Countries and adapted later by SLIC is intended to assess whether the Labour Inspection System (LIS) is developing as presupposed and in a sound way. It can also be used as a tool for comparing the OSH situation of different countries.

These audit tools, although important, are not the same as a performance measurement framework for labour inspectorates as they do not provide a methodology for assessing effectiveness of the work of the labour inspectorate.

3 LABOUR INSPECTION AUDITS – A METHODOLOGY, ILO 2008/2009, http://www.ilo.org/wcmsp5/groups/public/--ed_dialogue/lab_admin/documents/instructionalmaterial/wcms_118207.pdf

4 <http://www.ilo.org/ilolex/cgi-lex/convde.pl?R197>



The audit tools and the performance measurement framework complement each other.

Performance management of labour inspectorate staff

Performance management of a labour inspectorate involves the assessment of both organisational performance (its efficiency and effectiveness) and the personal performance of individual staff members. The process of performance management could include, for example, conducting discussions with staff to ensure that their personal goals are aligned with organisational goals and reviewing staff performance and productivity against pre-defined criteria.

There are many books and articles which have been written about how to manage staff for increased effectiveness. This handbook does not include the topic of how to manage staff in a labour inspectorate.

1.3 Who is this handbook intended for?

This handbook is intended for use by any labour inspectorate seeking to develop or improve a performance measurement system for their OSH function. It is likely to be particularly helpful to:

- ▶ A labour inspectorate in a country that does not have a well-developed OSH system or infrastructure, or that is in the process of establishing legislation and effective labour inspectorate processes. Such a labour inspectorate will need to develop and put in place a performance measurement system based upon best practice.
- ▶ A labour inspectorate that already has well established OSH regimes guided by implementation of key ILO guidelines and directives, but which is looking to implement best practices for measurement of performance. The case studies and best practice examples included in the handbook may offer inspiration for implementing this work, or help the labour inspectorate to learn from approaches adopted by fellow inspectorates across the world.

1.4 How is this handbook organised?

The Handbook is organised as follows:

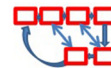
Part I introduces the concept of performance measurement as it relates to the OSH functions of labour inspectorates. It discusses the challenges and the rationale for undertaking measurement.

Part II provides a background to performance measurement in the world of OSH and labour inspectorates.

Part III introduces the conceptual framework and describes how it works, defines the key concepts and definitions of performance measurement, and delineates their scope and purposes.

Part IV is the main body of the handbook, intended for day-to-day reference. It includes practical guidance on the planning, organisation and conduct of monitoring and evaluation processes focused on development results (outcomes and outputs). It provides approaches and methods that can be used to measure performance through monitoring and evaluation.

Part V connects all the steps of the performance measurement framework.



Part VI includes case studies of how different countries are using performance measurement.

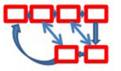
Part VII contains the appendices and references.

Users of this Handbook are encouraged to provide feedback on the publication as well as lessons learned from experience to the authors, thereby helping to improve the monitoring and evaluation framework.

1.5 Short glossary of terms used in the handbook

Many of these terms will be described in more detail later in the handbook; however it was felt to be important the key terms be introduced at the outset:

- **Goal** – is what the labour inspectorate wants to accomplish in general, e.g. safer and healthier work places.
- **Objective** – is more specifically what the labour inspectorate wants to achieve in order to progress the goal, e.g. reduction of accidents by X%, fewer instances of hearing damage in workers, etc.
- **Quantitative Data** – can be measured or counted and is numerically factual, e.g. annual rates of work-related injury and ill health; or the number of inspections conducted by an inspectorate over a set period of time.
- **Qualitative Data** – is subjective and can be open to interpretation, for example, OSH attitudes in an enterprise.
- **Parameter** – directly describes an OSH situation, e.g. number of accidents, a certain noise level etc. Parameters usually provide quantitative data.
- **Indicator** – indirectly describes an OSH situation, e.g. number of notices given by the labour inspectorate; absenteeism (quantitative data); OSH knowledge in an enterprise; OSH attitudes in an enterprise or if OSH-MS is implemented (qualitative data).
- **Measurement or Assessment** – is a statement of a given OSH situation using parameters or indicators.
- **Activities** – are actions taken by the labour inspectorate, e.g. conducting inspections, developing regulations, supporting research, enforcement, drafting guidance etc.
- **Input** – is the direct and indirect outlay of resource associated with the activities of the LI, including administration, research, expenditure, number of staff etc.
- **Output** – expresses the **Efficiency** of the labour inspectorate in terms of input vs activities undertaken, e.g. the number of inspections and other activities undertaken compared to the number of inspectors and staff available.
- **Outcome** – is the result of the labour inspectorate's effort, e.g. a reduction in the number of accidents or a reduction of the noise level in an enterprise. If the outcome is linked to labour inspectorate activities, it expresses the **Effectiveness** of the labour inspectorate.
- **Efficiency** – is expressed as **input** compared to **output**, e.g. the number of inspectors and other staff (input) vs the number of inspections or other activities conducted.
- **Effectiveness** – is expressed as the impact of a labour inspectorate's **activities**; e.g. the extent to which goals or objectives are achieved, or the extent to which targeted problems are solved.
- **Performance** – relates to the progress against a given OSH task measured against pre-defined goals or objectives. This is expressed through the **Effectiveness** of a labour inspectorate.
- **Attribution** – is defined as the crediting of an **outcome** to a particular person or organisation.



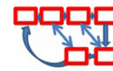
- ▶ **Responsibility** – refers to ownership of, for example, a project, a problem, an assignment. Responsibility can be shared.
- ▶ **Accountability** – is being held to the consequences of the outcome of the effort, i.e. to the outcome of the project, the solution of the problem, or the fulfillment of the assignment. Accountability cannot be shared. One could define accountability as the “ultimate responsibility”.



PART II

Translating performance measurement concepts to the OSH work of labour inspectorates can be complex.

This chapter provides a background to performance measurement of the OSH component of labour inspection.



The world of occupational safety and health is complex

Countries have been working for almost 100 years – and some even longer than that – with the concept of improving health and safety in the workplace. Many have put in place legislation, processes and systems, and have allocated enforcement staff to improve OSH.

However, over time, governments have come to realise that it is not only the labour inspectorate that can affect OSH standards; other factors can also have an influence. These include the employers, the workers themselves, their supervisors, the workers' representatives, the social partners, the government and its policies. Economic and social factors can also affect OSH.

With all these factors in play, how can performance measurement of labour inspectorates be accomplished?

This handbook establishes the foundation for this discussion through the conceptual performance measurement framework.

2.1 What is the role of a labour inspectorate in improving OSH?

A labour inspectorate can play a significant role in improving OSH. However, the labour inspectorate is not the only factor influencing OSH improvements at worker, enterprise and national levels. It is recognised that there are also significant roles for employers, supervisors, workers, trade unions, industry representatives, OSH professional organisations and other government agencies and departments. However, the labour inspectorate plays a central, indispensable and critical role by enforcing the law, stimulating improvements and working in partnership with others in the expectation that enduring initiatives should result.

Generally speaking, the role of the labour inspectorate is to work within their statutory framework, in partnership with employers and employees wherever possible, to ensure that OSH laws are applied properly in workplaces.

Within most statutory frameworks, the labour inspectorate is provided with many tools which they can use to influence positive change. Through fair and consistent enforcement, education of workers and employers and the implementation of various other prevention programs, the labour inspectorate should be able to directly influence the OSH situation of workers. If the inspectorate carries out its activities effectively, it is realistic to expect, for example, outcomes of increased safety in the workplace and increased worker participation in workplace safety and health.

These positive OSH outcomes – achieved through the activities of the labour inspectorate – can also generate practical benefits for the whole enterprise. Examples include a reduction in the number of injuries and illnesses suffered by workers, an associated reduction in their cost to the enterprise and a more engaged and cooperative workforce, potentially increasing productivity and economic returns.

Such positive outcomes for enterprises can also have an impact on society as a whole. As an example, they might contribute to generating economic growth and development, along with an increase in the standard of living for the population.

Theoretically, all these outcomes could be a step-wise logical progression resulting from a labour inspectorate's role in improving OSH. This is illustrated in the following diagram.

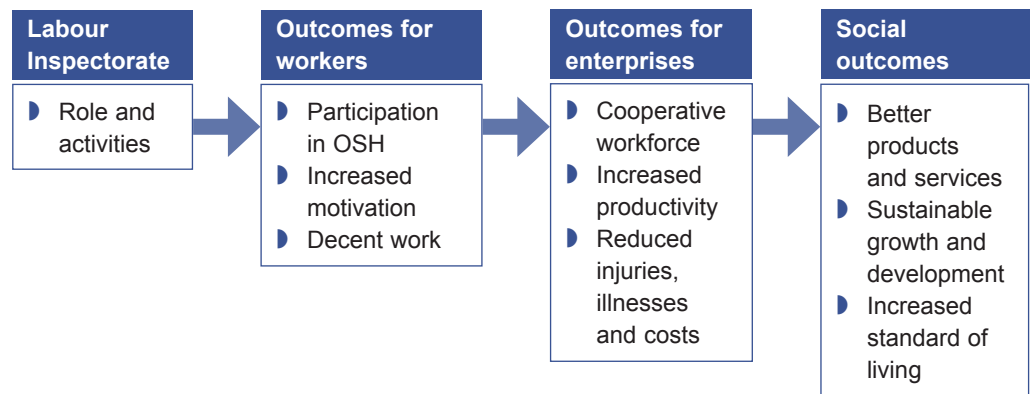
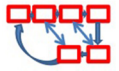


Diagram 1: Possible outcomes resulting from the role and activities of labour inspectorates⁵

2.2 Performance measurement in the world of OSH and labour inspectorates

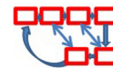
Performance measurement has long been an important component of business management and many articles have been written about this process. PART VIII of this handbook includes a brief historical overview of the application of performance measurement in business.

Businesses establish performance metrics (e.g. increased profit, increased revenue, increased market share) to guide which programmes, investments and acquisitions need to be undertaken to reach the desired business results. Measuring whether businesses have achieved these performance metrics can be relatively straightforward, e.g. businesses can directly measure increased profit or revenue.

However, measurement of improvement in the OSH situation is more complex due to a number of factors:

- **It is difficult to define what to measure**
Many government departments or public sector organisations are driven by the objective of improving people's lives; for example, one of a labour inspectorate's objectives is to improve work-related safety and health. For a labour inspectorate, "*improvement in health and safety*" can be a broad and imprecise concept and therefore an appropriate performance measure for this outcome may also be difficult to establish.
- **Potential costs of the performance measurement process**
As with other policies and procedures, performance measurement needs to be thought through carefully so as to focus the labour inspectorate's resources efficiently.
- **It is complex to determine attribution of OSH results to a labour inspectorate**
A labour inspectorate's activities and programs are only one of many factors which can affect the health and safety of workers. Through its programs of engagement and enforcement, a labour inspectorate wants to influence behavioural change in the workplace. Selecting appropriate performance measures and activities, and collecting the correct data to demonstrate that a labour inspectorate has directly influenced change in employers, workers and the OSH situation involves a deep understanding of labour inspectorate processes and activities. The concept of attribution will be discussed further in this handbook.

5 "Effective Labour Inspection", Michele Patterson, Dusseldorf 2007
<http://www.iali-aiit.org/resources/iali-forum-2007.pdf>



- ▶ **It is not easy to acquire or access appropriate data**
Some labour inspectorates have established databases (whether paper or technology based), which include information on inspection and enforcement activities (e.g. numbers of inspections, numbers of fines, numbers of prosecutions). When developing a performance measurement approach, it can be a challenge to define exactly what data is needed. It may also be more difficult to acquire and access this data, as it may be collected and privacy-protected by other agencies, e.g. social insurance organisations.
- ▶ **There is a time lag between intervention and results**
Depending on the type of issue and intervention, the difference in time between the implementation of an OSH initiative and the achieved improvement in OSH may be considerable.

2.3 If it is hard to measure the performance of a labour inspectorate, then why do it?

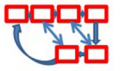
A key facet of good governance is accountability. In the public sector, accountability is the demonstration by government to its citizens that it has made good use of taxpayers' money in achievement of the goals and objectives that it set out for itself. Measuring and reporting on the performance of public services is one way that governments can be held accountable to their citizens.

As part of the public sector, a labour inspectorate should also be able to demonstrate whether it is effective in meeting pre-set goals for workplace safety and health by establishing and using a performance measurement framework.

Performance measurement is also a key contributor to strategic management. It provides the information necessary to make decisions about where to allocate people and money, and whether programmes should be maintained or terminated. It provides the necessary information for benchmarking against others.

Undertaking the process of performance measurement will provide a labour inspectorate with the necessary information to make decisions about how to refine or improve its effectiveness and efficiency and will allow the labour inspectorate to demonstrate how it can affect:

- ▶ **Achievement of public policy:** the extent to which a labour inspectorate attains the objectives of public policy.
- ▶ **Outcomes for workers:** the extent to which OSH and the workers' conditions improve as a result of a labour inspectorate's (LI) activities.
- ▶ **Outcomes for employers:** the extent to which LI activities benefit the enterprise.
- ▶ **Outcomes for society:** the extent to which LI activities contribute to increasing the standard of living at the national level.

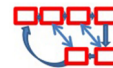


PART III

This chapter proposes a conceptual performance measurement model that is intended to be straightforward for use by labour inspectorates.

PART III covers:

- ▶ **The elements of the conceptual model**
- ▶ **Definitions of each element of the conceptual model**



A conceptual framework for performance measurement of labour inspectorates' work in relation to OSH

3.1 Background

In order to facilitate the performance measurement process, a labour inspectorate needs a straightforward performance measurement framework. By using this framework the labour inspectorate should be able to develop a few parameters that are easy to measure and which at the same time give a sufficient picture of the OSH situation to indicate the level of improvement to OSH.

A minimum number of parameters would keep the assessment simple and achievable. The number of parameters needed or used may vary over time as work life changes and also vary across country borders.

For certain situations and during certain time periods, one parameter or indicator might do. At another time or in other situations there may be a need for several parameters or/and indicators to draw a precise picture of the OSH status, however, the labour inspectorate needs to be aware of the cost benefit of measuring many parameters. It can be quite time-consuming.

To give a meaningful and fruitful picture of the OSH situation at a national level requires more than what is needed to be able to describe the situation in an individual enterprise. The number of accidents and the magnitude of absenteeism might be what an employer needs to manage the OSH situation, together with a well developed OSH management system. The OSH status at the national level requires a multitude of parameters/indicators, including of course accidents and fatal accidents but also numbers of work related illnesses, the number of notices issued and other indicators that point to the state of OSH culture.

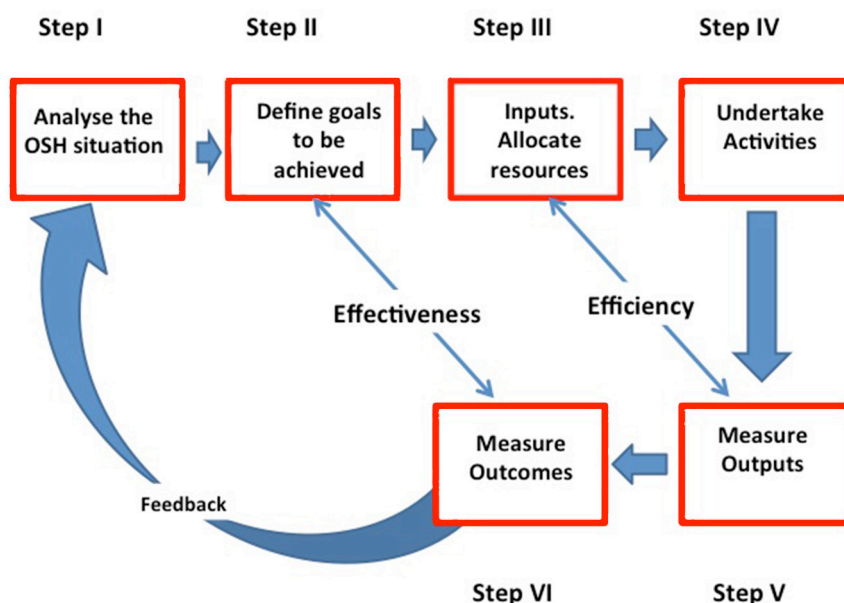
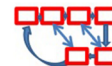
The conceptual framework for performance measurement of OSH work of labour inspectorates presented in this handbook has been developed based on advice from and discussions with international OSH experts (acknowledged in the front of this handbook and in particular Professor Jorma Rantanen).

The development of the framework also included the review of various performance measurement models available in existing literature (referenced in PART VII) and discussions following presentations about the handbook at recent IALI and ILO conferences.

3.2 Overview of the Performance Measurement Conceptual Framework for OSH work of labour inspectorates

The performance measurement framework presented in this handbook is based on a "logic model"⁶ because the framework "logically" or systematically connects the six important elements necessary for measurement.

6 Supporting Effective Evaluations: A Guide to Developing Performance Measurement Strategies, 5.0 Logic Model, Treasury Board of Canada Secretariat <http://www.tbs-sct.gc.ca/cee/dpms-esmr/dpms-esmr05-eng.asp> and The Public Value Scorecard: Mark H. Moore, John F. Kennedy School of Government at Harvard University. May 2003 http://www.hks.harvard.edu/hauser/PDF_XLS/workingpapers/workingpaper_18.pdf



This process makes it easy to identify and focus on those areas where understanding about the impact of the OSH programme is weak. It guides a labour inspectorate to think through, in an orderly way, what the labour inspectorate is trying to accomplish and the steps by which it believes it will achieve its objectives.

The six steps of this conceptual performance measurement framework for labour inspectorates will be described in detail in the following sections, along with examples.

3.3 Important definitions before using the framework

Performance measurement frameworks generally use a set of key terms.

For the purposes of applying performance measurement to the OSH work of labour inspectorates, definitions have been developed for these terms. These are described below using examples specific to labour inspectorates.

These terms are not new; many have been used by public sector organisations for many years. However, it is useful to establish a common understanding of these terms in the context of performance measurement for labour inspectorates.

3.4 Vision, goals, objectives – what is the difference?

Much confusion can be caused by the terms visions, goals and objectives.

Sometimes these terms are used interchangeably, but they do not mean exactly the same thing.

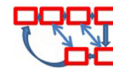
A “**vision**” statement answers the question, “What do we want to achieve for the future?” It is an inspirational description of an ideal future and provides the framework for strategic planning. It is often provided to the labour inspectorate by the government department responsible for OSH.

An example of “**vision**” for the labour inspectorate is:

- ▶ “Workplaces with no injuries”.

An example of an “**objective**” for the labour inspectorate could be:

- ▶ to reduce injuries in those workplaces which have had serious injuries in the previous year by X%.



A “**goal**” is an end that can be reasonably achieved within an expected timeframe and with available resources. For a labour inspectorate, it could be a general reduction at the national level of health related illnesses and injuries in order to fulfill the vision of workplaces with no injuries.

For the purposes of this handbook, the difference between an “**objective**” and a “**goal**” is that a goal is broader in scope and less specific than an objective. A labour inspectorate could, for example, identify as one of its **objectives** to obtain a reduction of the number of accidents in a certain sector by 10% in 5 years.

Generally speaking, both objectives and goals are directly related to the development of an expected outcome(s) for the labour inspectorate, and a government may choose to use one term instead of the other. Both objective and goal statements are created to help **measure performance**.

In summary, “**vision**” statements are “inspirational”, whereas objectives and goals are “directional”, i.e. specific and achievable.

3.5 Inputs

In a public sector programme such as occupational health and safety and labour inspection, “**inputs**” are people (their salaries and benefits) and the money and resources needed by the people to deliver the programme. A “**programme**” in this handbook refers to a group of activities undertaken by a labour inspectorate, for example, inspection, enforcement, awareness campaigns, training of inspectors etc.

Generally, capital costs or infrastructure costs are not included as inputs if a labour inspectorate is part of the government as a whole, e.g. cost of the building in which the staff are delivering the programme, cost of electricity or water etc. Often the labour inspectorate does not have control over these costs.

In countries where a labour inspectorate is a “self-standing” agency with control over its capital costs and infrastructure, these costs would become part of the cost-benefit calculation under “inputs”.

Examples of “**inputs**” for the Labour Inspectorate:

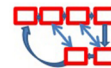
- ▶ All direct costs associated with inspection and enforcement activities and programs (inspector’s car, computer, uniforms etc) and the salary of the inspectors; awareness training for workers, employers and the general public
- ▶ All indirect costs of those departments which support inspectors e.g. departments that provide policies and procedures for the inspectorate; technology and administrative support; legal support etc

3.6 Activities

For a public sector/government programme, “**activities**” include those actions that people carry out to deliver the programme; for example, production of reports, analyses and research, consultation with stakeholders, inspections, etc.

Typical examples of “**activities**” for a labour inspectorate include:

- ▶ Conducting inspections
- ▶ Building partnerships
- ▶ Running surveillance programmes
- ▶ Supporting research



3.7 Outputs

“**Outputs**” for public sector or government departments are the products or services that the program makes available to a group of citizens. In essence, they express the amount of activity undertaken by a labour inspectorate.

Examples of “**outputs**” for the inspectorate include:

- ▶ The number of inspections conducted annually
- ▶ The number of targeted inspection or enforcement programs or campaigns
- ▶ The number of fines
- ▶ The number of prosecutions undertaken
- ▶ The number of partnerships developed or events undertaken
- ▶ The number of guidance publications

3.8 Outcomes

An “**outcome**” is the consequence or result (directly or indirectly) of output.

In the case of public programmes, “**outcomes**” are what happens as a result of the programme outputs.

Examples of “**outcome**” for the inspectorate include:

- ▶ Injury rate reduction at workplaces
- ▶ Increase in employer and worker awareness of a particular OSH issue or risk

In the field of labour inspection interventions, a very important parameter to be considered and measured is the “sustainability” of the outcomes. In other words, it would be necessary to evaluate the durability of the effects of an intervention.

3.9 Efficiency

A highly “**efficient**” process would be one which uses the lowest amount of inputs to create the greatest amount of outputs.

An **efficient** public program would be one that is described as producing the greatest amount of product or service for the public with the least amount of effort and cost. As an example, providing information to a large number of workers on how to adjust to heat stress in the workplace on a website could be more efficient in terms of time and required resource than answering the same questions with each worker personally by telephone. However, in this example, it would be important to ensure that this group of workers uses the website to access information about their working conditions.

The **efficiency** of a labour inspectorate is expressed through **output**. For example, the number of inspections as related to the input of resources in terms of number of inspectors.

Focusing the resources of the labour inspectorate on those enterprises where there is the highest risk of injury is also an example of **efficiency**.

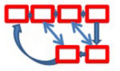
3.10 Effectiveness

“**Effectiveness**” is the extent to which goals are achieved and the extent to which targeted problems are solved.

Efficiency means “*doing things right*,” effectiveness means “*doing the right things right*.”

3.11 Attribution

“**Attribution**” is defined as the crediting of a result or product to a particular person or organisation.



For labour inspectorates, “**attribution**” is an important and difficult concept as it requires that the inspectorate demonstrate that an OSH change came about as a direct result of their efforts. This is difficult as there are many factors which can affect OSH in an organisation that it is not within the labour inspectorate’s ability to influence, for example, the economy and social trends.

It must be recognised that it is difficult (without a lot of effort) to definitively determine the extent to which a labour inspectorate directly contributes to an OSH outcome. It is possible, however, to provide some evidence and, with reasonable confidence, to conclude that a labour inspectorate is indeed making a difference or is having an “attributable” impact.

“**Attribution**” is indicated for public programs by using “*some form of comparison to estimate what happens with the programme in place versus what would happen without it.*”⁷ This methodology will be further described in this handbook, along with discussion of how it has been done using the case studies.

The following diagram (3.11) illustrates **attribution** through this scenario:

- The base year for measurement of workplace injuries for a labour inspectorate program is 2003. The injury rate is 2.2 injuries per 100 workers for 2003.
- A calculation is done to project the injury rate out to 2009, based on minimal changes to the economic situation of the country over this period of time (e.g. no sudden changes in the labour force, no unexpected decrease in injury rate, no decreases in employment).
- In 2003, a labour inspectorate implements an enforcement programme (perhaps targeted at those specific sectors experiencing the highest rate of injuries) along with information and education programmes supported by the enterprises and labour unions.
- The injury rate is tracked for these specific sectors between 2003 and 2009.
- The difference between the *projected* rate of injury reduction (calculated and illustrated by the **red line** in Diagram 3.11 below) and the *actual* injury rate (measured between the start of the labour inspectorates enforcement program illustrated by the **blue line**) shows a net change.
- In this example, the net change is from 2.2 to 1.8 is $[0.4/2.2 =]$ 18% reduction in injury rate in 4 years which can be attributed to the work of the labour inspectorate. For a workforce of 1,000,000, this means that 4000 injuries were prevented.

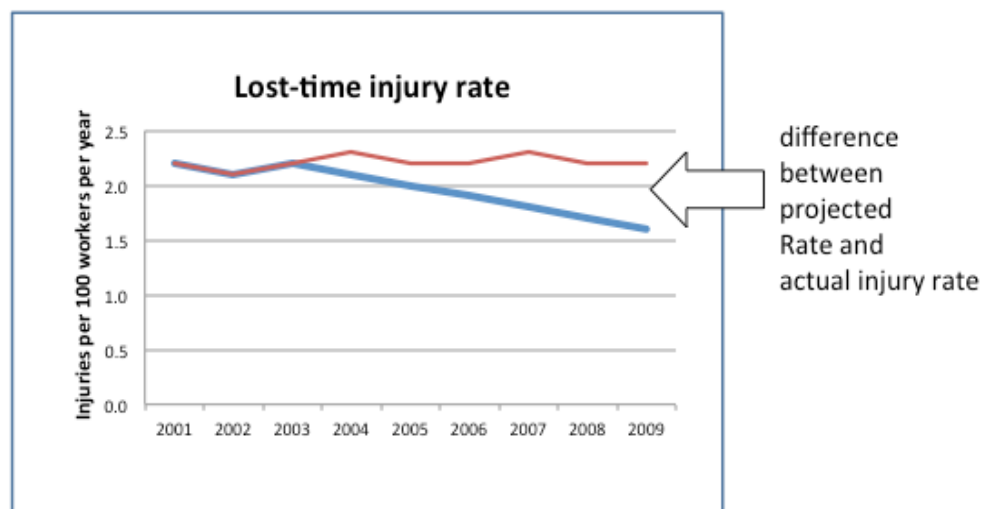
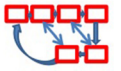


Diagram 3.11 Illustration of Attribution

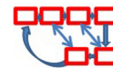
7 DISCUSSION PAPER: “Addressing Attribution Through Contribution Analysis: Using Performance Measures Sensibly”, John Mayne, Office of the Auditor General of Canada, June 1999



PART IV

PART IV explains how to use the conceptual performance measurement framework:

- ▶ **The six steps are explained**
- ▶ **Examples from case studies are used to illustrate the steps**



Applying the Conceptual Performance Measurement Model

4.1 Step I: Analyse the OSH situation

There are two steps which need to be taken as part of Step I of the performance measurement framework:

Define the problem(s)

To begin with, a labour inspectorate needs to ask:

What problem or issue does the labour inspectorate need to address? What needs to change so that OSH can improve?

For example, several labour departments [included in the case studies] noticed that the rate of workplace injuries was not declining, despite the best efforts of labour inspectorates and their programmes. They also noted, as is illustrated by the United Kingdom – Health and Safety Executive (HSE) example in the sidebar, that there was a high annual economic cost to the country from accidents and work-related ill health.

Some labour inspectorates identified the problem of an increase in certain types of injuries, such as musculoskeletal injuries, or a rise of injuries in certain sectors, such as construction.

Establish a baseline

Performance can only be measured if there is something to which it can be compared. A baseline (i.e. a particular date and data for measurement) serves as the starting point for measurement.

Case Study: United Kingdom – Health and Safety Executive

Step I: Analyse the OSH situation: Define the problem; Establish a baseline.

In the UK, provisional figures for 2007/08 showed that 229 workers were killed and 136,771 employees were seriously injured at their place of work. Similarly, during the same period, approximately 2.1 million people were suffering from an illness reputedly caused or made worse by their current or past work. The emotional toll to families and communities is enormous.

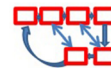
The impact on the economy showed that approx. 34 million working days were lost in 2007/08 due to consequences of accidents at work and work-related ill health. It was estimated that the annual cost to society of work-related accidents and ill health was a staggering £20 billion (approximately 2% of GDP).

[full case study in PART VI]

4.2 Step II: Establish goal(s)

Setting goals is the second step in the performance measurement framework. It is critical in the process of performance measurement.

A Government traditionally establish visions and goals based on input from its citizens and stakeholders, input from priorities and decisions of Cabinet, and input from the various government departments, such as the Department of Labour.



When undertaking performance measurement, the labour inspectorate needs to develop a clear, analytical understanding of its goal in support of the larger government vision. It needs to understand what it wants to measure and to develop a measuring method appropriate for its particular situation. There is no alternative for this customised approach.

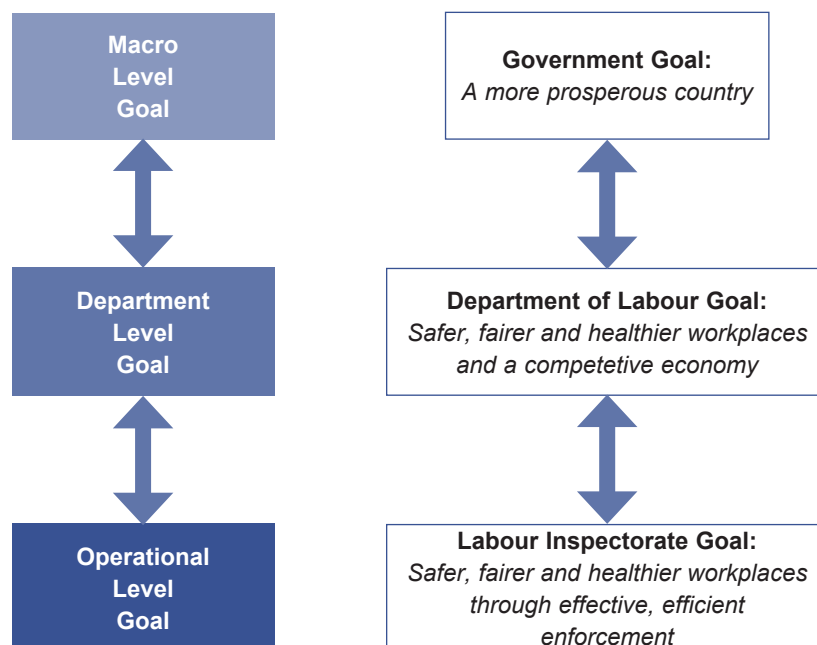


Diagram 4.2

The detail of how this (macro-level) government process for development of a strategic vision is undertaken is the subject of strategic planning publications and is not discussed in this handbook.

Many governments now have legislation which guides government departments in undertaking strategic plans as the starting point and how to undertake the supporting steps, e.g. creation of top-level goals and annual program goals. References are provided in this handbook for this Government-level process.⁸

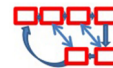
In these types of Government publications, the words “goal” or “objective” may be used. Regardless of which particular term is used by Government, both describe accomplishment of a “*state of increased public good*” at a point in time. As mentioned in Section 3.4 this handbook uses the term “goal”.

Once the Government defines its vision, the various departments and units work to align their departmental goals within that of Government.

As is shown in the example in Diagram 4.2 above, the Government vision is “*to be more prosperous*”. The labour department supports this vision – “*to work towards safer, fairer and healthier workplaces as part of a competitive economy*”.

The process of establishing a goal for the labour department usually involves staff of the different units within the labour department (e.g. policy, program development, the labour inspectorate) working together to develop objectives for the labour department that are aligned with, and support the greater goals of government.

8 <http://www.orau.gov/pbm/pbmhandbook/Volume%202.pdf>



As can be seen from Diagram 4.2, the process of developing these goals should be an iterative process between the policy and operations levels of the labour department.

The labour inspectorate develops its goals in support of the labour department or in those cases where the labour inspectorate directly reports to Government, it develops a goal in support of the Government's vision. In Diagram 4.2, the labour inspectorate's goal is "*safer and healthier workplaces through effective and efficient enforcement*".

The labour inspectorate's goal statement establishes a basis for measurement. The labour inspectorate will need to measure whether workplaces become healthier and safer through its "*efficient and effective*" programs.

Performance measurement systems succeed when the organisation's strategy and performance measures are in alignment and when the organisation's mission, vision, values and strategic direction are articulated clearly.

The goals give life to the vision and strategy by providing a focus that lets each employee know how their work contributes to the success of the organisation.

4.2.1 How to develop goals or the labour inspectorate (operational level)

The example in the case study illustrates how the goals of the Singapore Ministry of Manpower and the goals of the Occupational Health and Safety Division (including their labour inspectorate) are connected, and how they support each other.

Developing goals is a part of a larger strategic exercise and many books and articles have been written about how to undertake this process. However, the following may help guide a labour inspectorate in developing goals:⁹

Start with the Government vision or labour department's strategic goal

This is the vision of the Ministry of Manpower which relates directly to OSH. It is in the labour department's strategic plan. There may be other vision statements that the Ministry of Manpower has that do not relate to OSH, for example, employment rights.

In the example in the case study, the vision for Singapore is "*a great workforce, a great workplace*".

Next, in developing a goal(s) for the labour inspectorate, ask:

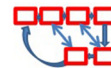
WHO do you want to reach?

What group of workers does the labour inspectorate want to reach? Which partners do the labour inspectorate want to work with or which stakeholders? In the example in the case study, the inspectorate wants to reach "*everyone*".

WHAT results do you expect to achieve?

What short-term (or intermediate) result(s) are possible through activities or outputs of the LI? In the case study, the LI expects less injured workers (i.e. less than 280 injuries per 100,000 workers).

9 <http://managementhelp.org/evaluation/outcomes-evaluation-guide.htm>



Then check back....

Is your goal relevant to the strategic objective of the department? Can it contribute to a long-term, sustainable result that can reasonably be expected in support of the department's strategic goal? Does it connect back to the problems or issues identified in Step I of the performance measurement framework?

Benchmark against others

Consider the achievements of other, similar OSH programs conducted by labour inspectorates which are considered leaders in the field (benchmarking). Consider whether their goals could be used as a starting point for your labour inspectorate.

Case Study: Singapore Ministry of Manpower

Step II: Establish goals

Vision of the Ministry:

A great workforce, a great workplace

Objective of the Occupational Safety and Health Division:

*A safe and healthy workplace for **everyone**; and a country renowned for best practices in worker health and safety*

Goals [of the inspectorate]:

...our target is to, by 2015, halve the fatality rate (of 4.9 fatalities per 100,000 workers in 2004), to attain standards of the current top ten developed countries with good safety records. ... to reduce workplace fatalities to less than 1.8 fatalities per 100,000 workers by 2018 and less than 280 injuries per 100,000 workers.

[full case study in PART VI]

A safe and healthy workplace for everyone; and a country renowned for best practices in worker health and safety

[full case study in PART VI]

4.2.2 What criteria should be considered when developing a goal?

The following criteria are intended for consideration when developing goals for performance measurement. These criteria have been developed in consultation with the countries participating in this handbook's case studies. In order to illustrate the criteria, an example will be used:

Example

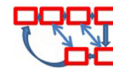
In a particular country, research has shown that construction workers have the highest rate of injuries, specifically from falls, as compared to workplace injuries in other sectors.

Research in this country has also shown that the first serious injury on a construction site is an indicator of a lack of safety culture and can lead to future injuries.

The labour department in this country has a vision of "workplaces with no injuries, and high safety culture in all workplaces".

Goals of the labour inspectorate

- ▀ to reduce injuries from falls on construction sites by 5% based on 2010 injury statistics;
- ▀ to increase worker knowledge of fall arrest equipment.



Program and activities of the labour inspectorate

To deliver the goals, the labour inspectorate undertakes a series of activities:

- ▶ Prioritising for inspection those construction sites where there have been one or more serious injuries during the previous year.
- ▶ Providing information materials to the employer about how to reduce injuries from falls. If the construction site has since moved or no longer exists, the labour inspectorate might recommend that the construction company involved should be traced and visited at their new site.

Using the above case as an illustration, the following are examples of criteria which a labour inspectorate can use to develop its operational goals:

Relevant

Is the goal relevant to the mission of a labour inspectorate and its priorities?

Using the example from above:

The goal of “*reduce construction injuries*” is supportive of the labour department’s vision of “*workplaces with no injuries...*”

The goal of “*increase worker knowledge*” relates to the vision as well “*...a high safety culture in all workplaces*”.

Credible

Is the goal credible, clearly defined and understandable to the citizens, to the social partners, to the workers and employers? Does the goal accurately reflect what is happening in workplaces?

Using the example from above:

The goal of “*reduce construction injuries by 5%*” is clearly defined and reflects a response to a serious problem in construction workplaces.

Measureable and sustainable

Is the goal “measureable” and can it serve as a tool over a period of time?

Using the example from above:

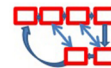
The labour inspectorate needs to ensure data systems are available to support the goal statement. For example, following their interventions the labour inspectorate needs to track the number of falls in the construction sector to look for any changes in underlying trends (these can be positive or negative).

Timely

Can the outcomes of the goals be measured in a reasonable timeframe so that the labour inspectorate can act on them to improve outcomes?

Although not a criterion for development of a goal, the importance of being able to access accurate and relevant OSH data cannot be understated. In some countries and jurisdictions, OSH data is collected by the workplace insurance organisation. Some labour inspectorates have legal authority to access this data, but even where this is not the case, efforts to work in partnership with these organisations can provide the information required for planning and performance measurement purposes.

Labour inspectorates can also make use of internal reporting and recording procedures to make use of data acquired from preventative inspection and investigation of accidents.



4.3 Step III: Allocate resources [inputs]

In many countries, a labour inspectorate is usually part of a larger Government organisation and is allocated a budget to deliver services and programs to meet its statutory obligations and the Government's goals and objectives.

Resources are usually defined as:

- ▶ The size of a labour inspectorate: the number of staff (not only inspectors, but enforcement staff, policy and program development staff, administrative staff, IT staff and legal staff etc if appropriate).
- ▶ The budget of a labour inspectorate: this includes salaries and the cost of employment conditions (e.g. pensions, leave allowances) for all staff; resources provided for use by a labour inspectorate for delivering its programs, e.g. cost of renting or purchasing offices, cars, computers, paper, pens, fax machines and printers, training of inspectors, etc.

4.4 Step IV: Undertake activities

The scope and functions of a labour inspectorate are always defined in legislation, for example, in a Labour Code or an Occupational Health and Safety Act and the supporting regulations or statutes.

In legislation, inspectors are given broad powers to, among other things, “inspect any workplace” and investigate any potentially hazardous situation. They can also stop work if identifying serious OSH breaches, investigate refusal to work, write an order for compliance with the Act and regulations and initiate prosecutions. Inspectors may also be provided with the opportunity to educate and inform employers, workers and the public. Often the legislation requires employers, supervisors and workers to assist and cooperate with inspectors. Labour inspectors are trained to fulfil their legal and statutory obligations.

What criteria should be considered when developing activities?

Activities are developed in order to fulfil the labour inspectorate's statutory obligations, as well as to deliver any goals or vision in support of this. A set of linked activities in relation to a specific issue or sector is often defined as a ‘programme’.

The case study from South Australia shows specific activities which have been developed to support the Government of South Australia vision, goals and objectives.

Vision: We are safe in our homes, community and at work

OSH goal: We are safe and protected at work and on the roads

Primary OSH objective: *Greater Safety at Work: To achieve a 40% reduction in injury by 2012 and a further 50% reduction by 2022*

Case study: South Australia Safework

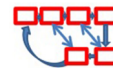
Step IV: Undertake activities

1. Communication

1.1 Deliver safe, fair and productive working lives message to the South Australian (SA) community

- ▶ Undertake a major media campaign aimed at promoting a safety culture in the SA community

1.2 Deliver the Front Line Services Charter



- ▶ Build progressive strategy for optimum use of resources to deliver timely and accurate information and advice to the community through alignment of Help and Early Intervention Centre (HEIC) and Field Services
 - ▶ Focus on proactive initiatives designed to support the prevention of work injuries
- 1.3 Deliver comprehensive HEIC services to SA community
- ▶ Promote accessibility of HEIC
 - ▶ Extend reach and uptake of Library and Bookshop in the SA community
 - ▶ Build Early Intervention Occupational Health & Safety (OHS), Health & Safety Representatives (HSR) and Committee liaison services

**Note: the full list of activities for Safework can be found in the PART VI)*

Most inspectorates use the following criteria to guide the development of “activities” for their labour inspectorate:

- ▶ relevant;
- ▶ understandable;
- ▶ controllable;
- ▶ accurate;
- ▶ timely.

Over the past several years, with budgetary constraints and an increase in economic activity, labour inspectorates are finding that they need to focus their activities on the most significant issues. Risk assessment, or risk-based targeting of activities has become best practice among labour inspectorates. This will be further explained in the section on outcomes.

4.5 Step V: Measure outputs

Outputs list the amount of activity undertaken by the labour inspectorate, for example:

- ▶ the number of inspections conducted annually;
- ▶ the number of targeted interventions or focused campaigns;
- ▶ the number of charges laid;
- ▶ the number of prosecutions undertaken, and the value of the fines collected;
- ▶ the number of partnerships developed or events undertaken;
- ▶ the number of publications.

The important consideration for the labour inspectorate is to measure the correct outputs as they relate to achievement of the outcomes, support the vision and goals of the government and that of the labour inspectorate.

Case study: United Kingdom Health and Safety Executive (HSE)

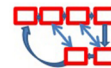
Step V: Measure outputs

Some of the output measures the UK HSE will use to monitor its own performance and the performance of the wider health and safety system include:

a. Monitoring the value for money of HSE

Amount of grant-in-aid and the proportion of HSE’s expenditure funded by grant-in-aid.

- ▶ The cost of operating HSE – including staff costs, bought-in goods and services and property over time and against projected cost.



- ▶ Number of employees in HSE including breakdown by function, grade and contract type.
- ▶ Cost of corporate services (including HR, finance, information and communications technology, communications and procurement) as a percentage of the cost of HSE.
- ▶ Property cost per square metre and per employee.

4.6 Step VI: Measure outcomes

Outcome(s) means a change or lack of change against a defined problem as a result of a labour inspectorate's activities.

Outcome is the measurement of the impact of output. As was mentioned earlier in the handbook (page 33), this is a complex exercise because there are many factors affecting the OSH situation.

Outcomes are influenced by many external factors which are outside of the control of the labour inspectorate (such as the economic climate) and, particularly in the case of long latency disease, it can take many years before the benefits of any intervention feed through into the outcome data. This can mean that it is difficult to see the direct link between labour inspectorates' activities or interventions and the result in terms of changes in the OSH situation.

Changes in business cycles will influence working life including the working environment and thus obscure the process of measuring the impact of labour inspectorate activities and output.

In addition, it is difficult to separate the labour inspectorate's outcome from the influence of other stakeholders (the question of attribution). Moreover there is often a long time span between the labour inspectorate's activities and the emergence of any effects, which will also make benchmarking difficult.

All these factors show the necessity of establishing very precise goals and to ensure that the input, the activities and the output are directly connected to the goals. This is true from a theoretical basis but practically the goal of the labour inspectorate may be quite broad in nature. If so, it may be necessary to break the goal down into a number of more precise objectives in order to enable the effective and efficient targeting of resource. This could potentially entail quite a large measurement burden, depending upon the number of goals or objectives (and their respective scope) that have to be assessed.

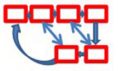
The following example is taken from the South Australia case study to illustrate the progress of measuring long term outcomes.

4.6.1 Developing outcome statements

What characteristics should outcome statements have?

Outcome statements should be:

- 1 related to well defined goals
- 2 quantitatively measurable (quantitative parameter)
- 3 specific and sensitive to changes



What are quantitative parameters?

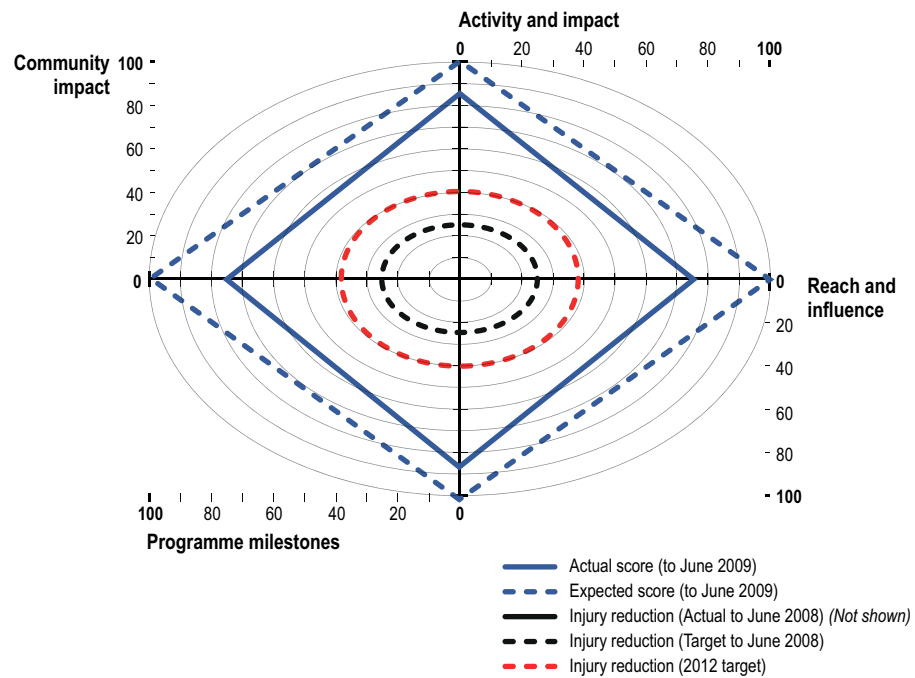
Parameters are capable of being measured or expressed in numerical (quantitative) terms, for example:

- ▶ workplace accidents;
- ▶ work-related illnesses, both physical and psychosocial;
- ▶ absenteeism;
- ▶ noise level;
- ▶ exposure to chemicals.

Case study: South Australia SafeWork

Step V: Measure outcomes

The figure below is reported in the Quarterly Performance Report (QPR) of SafeWork, June 2009.²¹ The method used can be compared to the one used by the Nordic countries and the EU.

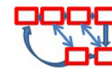


The red circle in the figure shows the 40% injury reduction target to be achieved by 2012. The dashed black circle shows the targeted injury reduction to the end of June 2008 (24%).

As is shown in the framework, outcome should be directly linked to the goals (Step II).

However, quantitative parameters may not meet the third characteristic of outcome statements because changes such as the number of accidents in an enterprise might be attributable to other factors than those of the labour inspectorate. This means that the approach of assessment must be focused in order to identify the effects of labour inspectorate activities as opposed to other influencing factors.

When it comes to work-related illnesses, the situation is more complex because of difficulties with diagnoses, the multiple causes most illnesses have and also because of the often long time span between an intervention and the effect of the intervention.



A prerequisite for this type of assessment is the availability of reliable statistics. Before an intervention, an inspection programme or a campaign is started one must ascertain that the OSH situation (e.g. expressed as number of accidents) is known.

What are quantitative indicators?

If the effect of their activities cannot be measured directly, a labour inspectorate might need to consider the use of quantitative indicators.

Quantitative indicators are signs of change.

It is assumed both internationally (e.g. by ILO, IALI) and nationally (reflected in national laws) that a health promoting work life and decent work in enterprises is created through improved OSH knowledge, social dialogue and improved organisation of OSH through the introduction of OSH-Management Systems (MS).

It is the intention that activities of a labour inspectorate should contribute to the general vision of high-quality working life. The extent to which this intention is fulfilled cannot always be measured directly. What is known, however, is that activities like inspection can generate improvements by enforcing the law and providing on-site guidance to employers. This can result in, for example, the introduction and improvement of OSH-Management Systems in enterprises and use of routine risk assessment procedures. In theory, risk assessment will increase awareness and improve the control of risk, thereby decreasing the number of work-related accidents and illnesses.

The activities of a labour inspectorate are likely to lead to changes in enterprises' approaches to OSH, which will result in fewer accidents, fewer illnesses etc. These changes are measurable and thus the following can be used as quantitative indicators of change in the OSH situation:

- ▶ application of OSH-MS;
- ▶ rates of sick leave;
- ▶ level of OSH knowledge;
- ▶ OSH attitudes.

Such quantitative indicators are used by labour inspectorates in different countries to measure the progress of their OSH work in enterprises. An example is shown in the case study from the Danish Working Environment Agency.

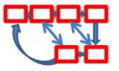
Case study: Using leading indicators

The Danish "impact ladder"

A basic tool for evaluating or measuring the performance of the Danish labour inspectorate (The Working Environment Agency) is the "impact ladder". The impact ladder was developed on the basis of an analysis of impact measurement methods in the Nordic countries. It consists of a number of variables that establish a system for the levels at which goals are defined and impacts are measured.

- ▶ Rung 7: Improved health indicators, e.g. reduced sick leave
- ▶ Rung 6: Reduction in the rate of industrial accidents and work-related diseases
- ▶ Rung 5: Reduction in exposures, including risks of accidents
- ▶ Rung 4: Improved (safer) production technology and safer work processes
- ▶ Rung 3: Improvements in the companies' own OSH management
- ▶ Rung 2: Changes in the attitudes at the workplaces
- ▶ Rung 1: Changes in the knowledge at the workplaces

**Note: the full case study for Danish WEA can be found in the PART VI)*



4.6.2 How to build an outcome statement

For the purposes of a labour inspectorate, outcome(s) is measured against achievement of their vision, goals and objectives.

As progress towards this is taken forward in a stepwise fashion, an outcome statement can also be used to report on an intermediate endpoint or milestone. These are usually pre-determined by the labour inspectorate when planning programmes of work and can include a range of activities and/or indicators, e.g. the successful organisation of a conference or other event, delivery of an inspection campaign, employer/worker feedback etc.

The case studies in this handbook illustrate that outcomes may be related to:

- (a) Health and safety: A change or lack of change, in the physical or mental health of workers.
- (b) Attitudes and awareness: A change, or lack of change, in the safety culture of a workplace.
- (c) User satisfaction: The response of workers and employers to labour inspectorate activities.

It is not suggested that all outcome statements need to include all three facets. As a guide, outcome statements usually identify:

- ▶ what needs to change;
- ▶ by how much;
- ▶ by when.

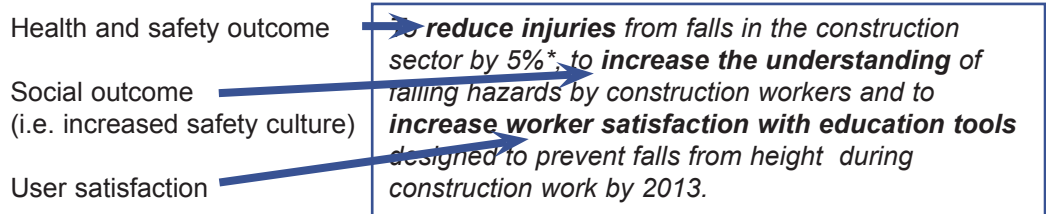
The outcome is affected by the specific activities of the labour inspectorate, such as inspections, investigations, educational services offered by a labour inspectorate.

For example, the following could be an outcome statement for a labour inspectorate:

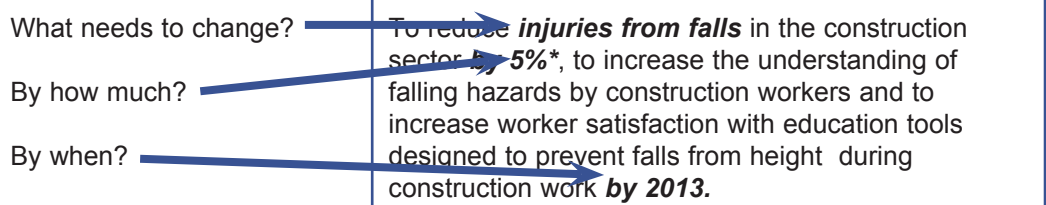
To reduce injuries from falls in the construction sector by 5%, to increase the understanding of falling hazards by construction workers and to increase worker satisfaction with education tools designed to prevent falls from height during construction work by 2013.*

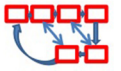
**based on injury statistics of 2011*

This outcome statement includes specific reference to:



This example outcome statement has also included:

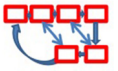




PART V

PART V connects all the parts of the framework by explaining:

- ▶ **how to put it together**
- ▶ **the importance of supporting data**



Connecting the Steps of the Conceptual Performance Measurement Model

In PART 4.2, an overview was provided of the performance measurement framework presented in this handbook. The basis of this is the “logic model”¹⁰ because the framework systematically connects all the important elements necessary for measurement.

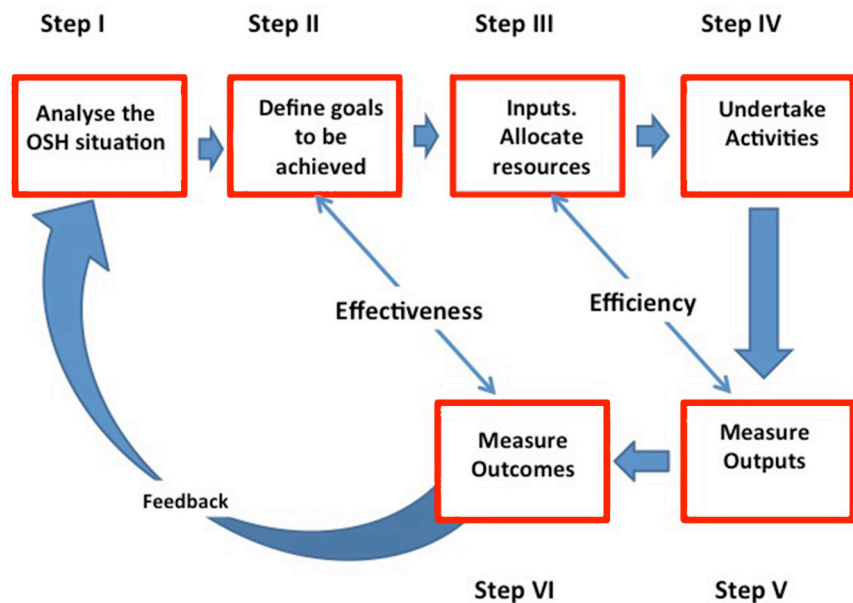
PART V guides a labour inspectorate through the six steps of the framework, starting with reviewing the OSH situation and ending with a definition of outcomes.

Performance measurement is a step-wise process but should not be viewed as linear. It is iterative and a labour inspectorate could at each stage, check the impact on the stages.

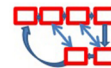
This section will explain that as a labour inspectorate works through the framework, it needs to check back through previous steps to ensure it is on the right track.

5.1 Check if activities are aligned with outcomes

Activities need to be lined up against outcomes.



10 Supporting Effective Evaluations: A Guide to Developing Performance Measurement Strategies, 5.0 Logic Model, Treasury Board of Canada Secretariat <http://www.tbs-sct.gc.ca/cee/dpms-esmr/dpms-esmr05-eng.asp> and The Public Value Scorecard: Mark H. Moore, John F. Kennedy School of Government at Harvard University. May 2003 http://www.hks.harvard.edu/hauser/PDF_XLS/workingpapers/workingpaper_18.pdf



A labour inspectorate needs to look at every activity (or set of activities – a program) and needs to ask:

Is this activity (or program) contributing to solving the problem or issue (identified in Step 1 above)?

Is this activity helping change an issue so that OSH can improve?

Not all activities are equal. Activities may vary in difficulty, the amount of resources required, and the time taken to deliver them (some will be ongoing). The labour inspectorate needs to be aware of this when using this information for measuring progress towards their desired outcomes.

5.2 Connect milestones and indicators to outcomes

As was mentioned earlier, it often takes many years to measure whether an outcome is reached.

In order to maintain momentum, a labour inspectorate can use successful completion of an activity as achievement of a milestone or progress towards the outcome. A milestone can also be called achievement of a “short-term objective”. A milestone is met through activities of the labour inspectorate; an indicator is the result of activities of a labour inspectorate.

Example – milestone

A labour inspectorate wants an outcome of improved OSH in manufacturing enterprises. The labour inspectorate has visited 100% of the manufacturing enterprises. Each enterprise has been inspected by a labour inspector and has been provided with relevant OSH information.

The completion of these activities represents a milestone which could be part of a larger set of labour inspectorate activities.

Communication of the achievement of milestones by a labour inspectorate may be useful in showing active progress towards an outcome, for example, milestones which show improvements in employer and worker awareness of a specific risk or hazard.

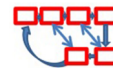
5.3 Obtain data to support performance measurement

Having data is fundamental¹¹ to measuring performance, but deciding what data to collect and how to collect it is complex. The use of statistical methods can become important as the complexity of the outcome measurement increases.

“Without data, you are just another person with an opinion.”

W. Edwards Deming, American Statistician, 1900–1993

11 “Grassroots Approach to Statistical Methods” R. S. (Bud) Leete, Lockheed Martin Energy Systems



5.3.1 Collecting data

Define exactly what data is needed and how to collect it. Then, decide how to make the calculation necessary to measure performance and make sure that everyone understands.

Once the labour inspectorate decides what data it needs to measure, it needs to document the collection, calculation and measurement procedures carefully for consistency. It also needs to be very careful when comparing its data to that of other labour inspectorates, as illustrated in the example below:

Example

The outcome measure of 'reduction of injuries' is used by many labour inspectorates. However, a labour inspectorate needs to carefully look at how it wants to define work-related "injury". One jurisdiction may only count injuries that result in the worker being absent from work for 3 days or more (usually referred to as a "lost-time injury"), whereas others may count any injury as soon as it happens at the workplace.

Without standardising the data collection, a labour inspectorate will leave itself vulnerable to variations such as these which are introduced through differing approaches and interpretation.

5.3.2 Analysing data: Determining attribution

Who should be involved in determining attribution of the labour inspectorate's activities?

It would be best practice that those assessing or judging outcome measures specific to the labour inspectorates work:

- ▶ have some analytical training; and
- ▶ have some independence in this assessment from those delivering the intervention.

This could be accomplished by a dedicated unit within the labour inspectorate, or by a separate organisation.

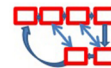
Fully transparent methods for data collection, analysis and publication would give wider confidence in these judgements. For example, in the UK some of the outcome measures used by HSE conform to a national statistics standard.¹²

5.3.3 Important data concepts to consider

Bias: Data sources all suffer from some form of bias and the facets of what is being measured also affect the levels and types of bias. It is important that the labour inspectorate understand the bias in the data when used as the basis for outcome measurement.

External Influences: Business cycles can affect injury rates and need to be considered when data is used for performance measurement. For example, in an economic upturn injury rates can rise because of a greater risk to newly hired and inexperienced workers. Conversely, injury rates may fall during an economic recession due to the effects of worker redundancies and reduced availability/undertaking of work.

¹² <http://www.hse.gov.uk/statistics/about.htm>



Other external factors can also affect injury and ill-health rates, for example, structural changes to a country's industrial composition, e.g. a shift in emphasis from (higher risk) manufacturing to (lower risk) service industry.

Some statistical analysis can adjust for industry composition, for example, EUROSTAT¹³ adjusts European countries' work-related injury rates to account for differences in industrial composition between the different economies.

External influences can affect reporting behaviour, for example, if there is a general move to smaller businesses then injury reporting may well fall (even if the actual number of injuries remains constant).

5.3.4 Broad guidance and criteria on how to attribute change to the intervention work of a labour inspectorate

Drawing from Bradford Hill type criteria used in epidemiology,¹⁴ the following may point to factors that would give a labour inspectorate greater confidence that any change in outcome is related to outputs or interventions of the labour inspectorate's programmes or initiatives.

Temporal relationship: Input or intervention precedes change in outcome (rate).

Coherence: Coherence between findings and current knowledge would give greater assurance of causality.

Strength of change: The greater the change in outcome after the intervention, the more likely that at least some of it may be related to the intervention.

Specificity: If the intervention is aimed at generating a very specific change and there was a marked change in only this specific outcome, then there would be more confidence that the intervention had caused this change.

5.4 Putting it all together

The final example puts all the pieces of the conceptual framework together by using elements of a case study. The full case study can be found in PART VI of this handbook.

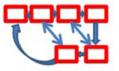
As was mentioned in the beginning of the handbook, although the conceptual framework uses a step-wise approach, the process of implementing the framework need not be linear. The important lesson that all the countries have learned is that the labour inspectorate "just has to start". Some countries may choose to start by having a look at their activities against injury reduction, using this to reassess their goals and how they are implementing their statutory responsibilities.

However, it is hoped that this handbook has convinced the reader that measurement can enhance the effectiveness of an organisation because it establishes clear links between past, present and future interventions and results.

Without monitoring and measurement, it is not possible to evaluate if the work of labour inspectorates is aimed in the right direction, whether progress and success can be attributed, or how resource levels may be maintained or even increased.

¹³ <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>

¹⁴ Epidemiologic Perspectives & Innovations 2009, 6:2 " The role of causal criteria in causal inferences: Bradford Hill's "aspects of association" Andrew C Ward



Case study: Ontario Occupational Health and Safety System (OSHCO)

Connecting all the steps

In 2003, the injury rate in Ontario was one of the highest in Canada, despite over 48,000 health and safety inspections annually, Ontario had >104,000 injuries at work and the number of injured workers had increased by 51% since 1995.

Step I: Analyse the OSH situation

In 2003, the goal of the Ontario Government was:

- ▶ A more prosperous Ontario

The Goal for the Ministry of Labour was:

- ▶ Safer, fairer and healthier workplaces and a competitive economy

Step II: Establish goal(s)

In support of the Ministry of Labour, the Goal of the labour inspectorate was:

- ▶ Safer & healthier workplaces through effective efficient enforcement

Establish baselines and timelines for goals identified in Step II.

OSHCO, a system of safety partners, developed an integrated strategy to reduce workplace injuries by 20% in four years (2004–2008) thereby also avoiding over \$960M in costs to employers.

- ▶ The strategy baseline lost-time injury rate (2003) was 2.3 injuries per 100 workers.

The Ministry of Labour's 'High Risk Firm' strategy (2004–2008) applied a doubling of the number of labour inspectors (from 200 to 400, representing an additional annual expenditure of \$25 million) to the targeting of enforcement activities to the poorest performing Ontario employers.

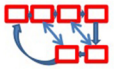
Step III: Allocate resources (inputs)

The total budget of the labour inspectorate was approximately \$50 Million (C\$) and for the Ministry of Labour Occupational Health and Safety Program³¹ \$89.65 Million (C\$).

In 2004, the Ministry of Labour led the design and implementation of the 'high risk firm' initiative. Under this program, the poorest performing 10% of Ontario workplaces (30,000 enterprises) were selected annually for either intensive labour inspection attention (up to four inspection visits per year) or for targeted services from the health and safety associations. These workplaces accounted for 40 per cent of all lost-time injuries and claims costs.

Step IV: Undertake activities

Also the Ministry of Labour conducted the following activities, for example, raise awareness of the importance of preventing ergonomic-related injuries such as back pain, muscle strain and tendonitis, which account for 42 per cent of all lost-time injuries in Ontario.



Case study: Ontario Occupational Health and Safety System (OSHCO)

Connecting all the steps

Based on the targeted initiative described above, along with an increase in the inspectorate, outputs³² for the period between 2004 and 2008 are as follows:

- ▶ Visits by labour inspectors to enterprises increased from 52,673 (2004/05) to 101,275 (2007/08).
- ▶ Inspections increased from 34,530 (2004/05) to 66,230(2007/08).
- ▶ Investigations increased from 16,202 (2004/05) to 25,430(2007/08).

Prosecutions increased from 618 with \$7M (C\$) in fines to 1191 with \$12M(C\$) in fines.

Since the targeted enforcement strategy was launched in 2004–05, the Ministry has achieved the following:³⁴ Approximately 54,000 lost-time injuries were avoided; The lost-time injury rate has been reduced to 1.8 per 100 workers, from 2.2 entering 2004–05; WSIB costs of an estimated \$1.053 billion have been avoided.

Step V: Measure output

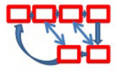
Step VI: Measure outcomes



PART VI

Although examples from the case studies have been used to illustrate points in the handbook, this section includes the full case studies.

The case studies are organised in a way to demonstrate and illustrate how various jurisdictions have used the different concepts of performance measurement as described in this handbook.

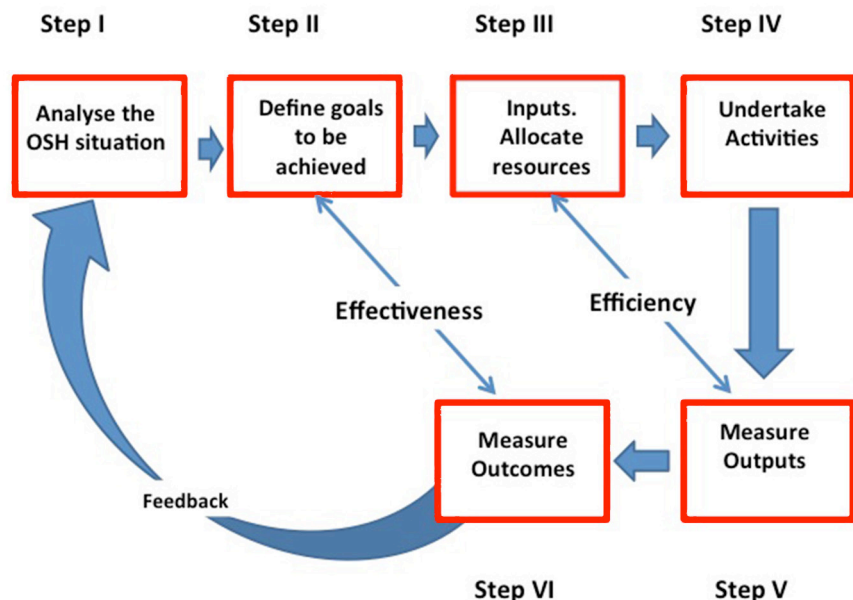


Performance measurement in action – Case studies

The conceptual framework discussed in this handbook provides a visual representation of the links between the various stages of the framework. It emphasises that inputs, activities and outputs only make sense in relation to the outcomes that they are supposed to be influencing. The framework requires a labour inspectorate to address the question:

To what extent does OSH improve as a result of a labour inspectorate's activities?

There are six steps in the performance measurement framework:



The case studies included in this handbook have been developed from information provided by various IALI member countries between 2011–2013. The reader should contact the relevant jurisdiction directly if seeking updated information.

These case studies show that although different approaches have been used, the concepts introduced and explained in this handbook have always been applied. The methods used by the different countries depend on the OSH situation, culture and on the availability of reliable statistics.

Links and references are provided for those who want to study the methods in more detail.

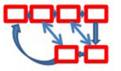
Australia (South Australia)

Austria

Canada (Ontario)

Denmark

Lithuania



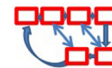
Netherlands

Norway

Singapore

Slovenia

United Kingdom



SafeWork South Australia (SWSA)

Government of South Australia

Vision: *We are safe in our homes, community and at work*

OSH goal: *We are safe and protected at work and on the roads*

Primary OSH target: *Greater safety at work: To achieve a 40% reduction in injury by 2012 and a further 50% reduction by 2022.*

In 2006, it was recognised that agency inputs and activities do not necessarily translate into injury prevention outputs and outcomes, and it set about implementing a process of performance measurement. The process implemented by the SWSA is very similar to the conceptual performance measurement framework as described in Steps I–VI of this Handbook.

SWSA developed and implemented a Scoreboard approach, based on key performance indicators as outlined in the SWSA Annual Strategic Plan. This plan is used to demonstrate the quarterly performance of the SWSA in addressing the South Australian Strategic Plan target.¹⁵

The SWSA scoreboard has four axes:

- 1 Activity & impact measures;
- 2 Reach & influence measures;
- 3 Programme milestones;
- 4 Community impact measures.

External surveys and audits of the community and employers are an important part of the Scoreboard approach, particularly for the **Reach & influence measures** and **Community impact measures**, enabling SWSA to re-assess and adapt its activities to meet specified performance criteria: an example is the percentage of employers that demonstrate improvement in OHS as a result of intervention, which is determined via audits.

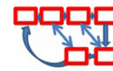
Activity & impact measures, which are important drivers of prevention impact and have set numerical targets, include:

- number of workplace intervention activities, such as reactive and proactive workplace visits;
- number of workplace health and safety (WHS) investigations finalised within specified quality parameters, measured via an index referred to as a Quality Adjusted Performance Indicator (QAPI) of WHS investigations;
- number of prevention initiatives delivered.

The National Occupational Health and Safety Strategy 2002–2012 set the target to reduce the incidence of workplace injury in Australia by at least 40% by 30 June 2012¹⁶ and the Australian Work Health and Safety Strategy 2012–2022 sought a further 30% reduction by 2022.

¹⁵ http://www.safework.sa.gov.au/uploaded_files/swsa_qpr_dec2010.pdf

¹⁶ http://publicsectorsafety.wa.gov.au/about_us/National_strategy.html



[Reference: <http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/719/Australian-WHS-Strategy-2012-2022.pdf>].

South Australia aims to achieve a greater reduction (50%) by 2022 than sought for Australia overall (30%).

SWSA's Strategic Framework

The targets are in the SWSA Strategic Plan reflecting the targets in the National OSH/ WHS Strategy 2002–2012 and 2012–2022 and the greater reduction expected in South Australia relative to Australia as a whole by 2022:

- 10% reduction in work fatalities by June 2007;
- 20% reduction in work fatalities by June 2012;
- 20% reduction in workplace injury by June 2007;
- 40% reduction in workplace injury by June 2012;
- A further 50% reduction by June 2022.

Principles of SWSA's Strategic Framework

The Framework is underpinned by the following principles:

- 1 Access and equity issues are considered in all activities undertaken.
- 2 Effective compliance involves elements of information, assistance, compliance and enforcement.
- 3 Workplace partners, stakeholders, government and community are encouraged to systematically manage WHS responsibilities.
- 4 Effective partnership is built with all stakeholders.
- 5 Probity and performance evaluation is undertaken in all programs.
- 6 Service delivery is transparent and accessible.
- 7 Research is undertaken to provide relevant data to assist decision making.

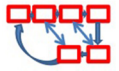
Priorities of SWSA's Strategic Framework

- Reduce high risk incidence/severity risks.
- Improve the capacity of workplace partners, stakeholders, government and community to improve and influence outcomes.
- Prevent occupational disease more effectively.
- Eliminate hazards at the design stage.
- Protect young and new workers.

Establish baselines and timelines for goals identified in Step II

Performance can only be measured if there is something to which it can be compared. For this purpose, it is necessary for a LI to establish a baseline against which it can measure its progress.

In addition, for comparison purposes, a LI may choose to establish an external benchmark against which it can compare itself and its progress, for example, by



looking at the achievements of other, similar SLI programs that are considered leaders in the field.

SafeWork South Australia (SWSA)

In South Australia, the performance measurement baseline year was the period 2001/02; the baseline time-lost (income maintenance claims greater than 10 days) injury rate per million dollars remuneration was 0.2432. At national level the agreed measure for national comparative performance assessment is the rate of time-lost injuries in excess of five days expressed as a rate per thousand employees using national employment survey data.

The South Australian target was to reduce the rate by 40% from 2001/02 to 2011/12 and by 50% from 2011/12 to 2021/2022.¹⁷ The national target seeks to achieve a lower target for 2012–22 (30% reduction) than the target chosen for the State of South Australia (50%).

The measurement framework, parameters and indicators used for performance measurement, and the process used to develop them are described in:
http://www.safework.sa.gov.au/uploaded_files/swsa_qpr_dec2010.pdf

Step III: Allocate resources [inputs]

“Resources” are usually expressed in the number of staff and the budget allocated to a labour inspectorate. This is referred to as “input” to the activities undertaken to address the OSH situation.

SafeWork South Australia (SWSA)

In 2011, SWSA labour inspectorate employed approximately 279 staff which includes OSH inspectors, operational program and policy development and administration.

SWSA Net Resource Budget is 28.965 million Australian dollars.¹⁸

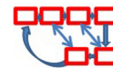
The WHS strategy for SWSA is applicable for the whole OHS system. One of the key strategies is to motivate others in the WHS system to contribute. However, the resources allocated by others are not known.

Alliance partners

The key Alliance Partners under South Australia’s Strategic Plan include: public and private sector employers and employer associations, including self-insured employers association and State insured workers compensation authority; employee associations and representative bodies, such as Unions; other contributors to workplace safety, such as supply chain participants.

¹⁷ South Australia’s Strategic Plan <http://saplan.org.au/priorities/our-community>

¹⁸ Budget 2009/10 includes funds transferred from WorkCoverSA



The Alliance Partners adopt the workplace injury reduction target of the South Australia's Strategic Plan and are responsible for reporting on their strategies, actions and contributions to the achievement of the target. The most significant of these Alliance Partners have their performance regularly reported to the South Australian public via the SWSA Quarterly Performance Report (see the performance of the Self-Insured Public Sector Workforce, Self-Insured Private Sector Workforce and Registered Employer performance, all reported in: http://www.safework.sa.gov.au/uploaded_files/swsa_qpr_dec2010.pdf)

Step IV: Undertake activities

A labour inspectorate needs to develop strategies which are aligned with those of its government's OSH goals. The labour inspectorate then implements its strategies through specific activities or operational strategies, thus, the labour inspectorate contributes to achievement of the OSH goals of the government.

SafeWork South Australia (SWSA)

Key Strategies of the SWSA

OSH outcomes are achieved through the following key strategic activities:

Communication: Raise awareness of identified, relevant and targeted groups.

Engagement: Gain commitment from everyone.

Education: Develop knowledge, understanding and skills; and foster quality education and training.

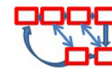
Intervention: Ensure compliance and assist industry.

Evaluation: Monitor and assess for ongoing improvements.

Step V: Measure outputs

The direct products/services delivered, or activities undertaken, by a labour inspectorate is referred to as "output". For example, the number of targeted inspections conducted annually by a LI. Usually, a labour inspectorate develops these specific activities as part of the overall OSH strategies which have been created to address the goals and targets set out in Step II.

Output (the activities expended by the LI) and resources used to undertake these activities provide the LI with a calculation of efficiency of the LI.



SafeWork South Australia (SWSA)

Since the commencement of the National Occupational Health and Safety Strategy 2002–2012, compliance and enforcement activities in South Australia have increased substantially. Between 2000–03 to 2009–10:¹⁹

- ▶ 27,203 workplace interventions were undertaken 2010/2011 and the interventions can be characterised as being 60% – 40% reactive to proactive. On-site interventions are the most common and the inspections are risk-based.
- ▶ Number of field active inspectors increased from 57 to 93. In 2009–10 South Australia had one of the highest rates of field active inspectors per 10,000 employees of any Australian jurisdiction.
- ▶ Number of workplace interventions increased from 10,325 to 21,079.
- ▶ Number of improvement notices issued increased from 1,025 to 1,841.
- ▶ Number of prohibition notices issued increased from 191 to 628.
- ▶ Total amount of fines awarded by the courts increased from \$101,000 to \$875,000.

Step VI: Measure outcomes

Measuring outcomes is a measure of program effectiveness. The question of “is the LI effective in meeting the goals, objectives and targets as set out in Stage II?” is answered by measuring outcomes.

These outcomes are often measured in “rate” for example the “rate of reduction of injuries or absence from work, per worker population” against the targets set out in Step II (above).

SafeWork South Australia (SWSA)

The injury rate in South Australia over the period 2000–03 to 2005–06, prior to the commencement of SWSA, was one of highest in Australia.²⁰ Incidence rates (claims per 1000 employees including serious compensated injury and musculoskeletal claims) was 18.3 for South Australia as compared to the national Australian average of 14.8 claims per 1000 employees.

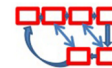
Since then, the decline in the injury rate has been greater in South Australia than in any other Australian jurisdiction:

- ▶ The national Comparative Performance Monitoring report for the period up to 2010–11 shows a rate reduction of 41% for South Australia compared to 28% for Australia as a whole and a targeted reduction nationally of 36% up to that point in time.
- ▶ South Australia was the only jurisdiction to have achieved the target to that point in time.

SafeWork South Australia’s key outcome measure is injury rates (measured from a baseline year of 2001–02).

¹⁹ see 2001–02 baseline results in: <http://www.deewr.gov.au/WorkplaceRelations/WRMC/Documents/CPM2005PartA.pdf>; Up to date reports are published as comparative monitoring reports and can be found under <http://safeworkaustralia.gov.au/AboutSafeWorkAustralia/WhatWeDo/Publications/>

²⁰ see Indicator 2 on page 3 of the Comparative Performance Monitoring report: <http://safeworkaustralia.gov.au/AboutSafeWorkAustralia/WhatWeDo/Publications/Pages/CPM12.aspx>



The data source is submitted by a single insurer (WorkCover SA) which manages South Australia's compensation scheme. The number of income maintenance claims to WorkCover (i.e. injury resulting in 2 weeks or more time lost from work) arising from workplace injuries is the injury measure, expressed as a rate per million dollars remuneration: remuneration is a routinely available and reliable proxy for employment levels which are otherwise only available by national survey and is provided at the level of individual firms whereas employment data are only provided in aggregated form covering whole industries, broad age groups etc. At national level the agreed measure is the rate of time-lost injuries in excess of five days expressed as a rate per thousand employees using the national survey data and presented in an aggregated form.

SWSA uses a performance measurement framework as described in this Handbook called a Scoreboard. SWSA's "Scoreboard" is based on the WHS Strategic Plan of SWSA. The example here covers the period 2008–09 and is illustrative of the approach used each year. It shows the achievement against Target T2.11 as well as progress on the SWSA key performance indicators (KPIs). Performance on the KPIs is assessed quarterly and reported as a cumulative score out of 100% for the following key performance areas (KPAs):

Activity and impact – refers to the activities of the inspectors (worksite visits, inspections, safety audits, investigations)

Reach and influence – number of people reached through the labour inspection activities

Programme milestones – refers to delivery of the activities in the SWSA programme according to agreed milestones

Community impact – refers to assessment of the changes occurring in the community as a consequence of the SWSA activities.

The figure below is reported in the Quarterly Performance Report (QPR) of SafeWork, June 2009.²¹ The method used can be compared to the one used by the Nordic countries and the EU.

The red circle in the figure shows the 40% injury reduction target to be achieved by 2012. The dashed black circle shows the targeted injury reduction to the end of June 2008 (24%).

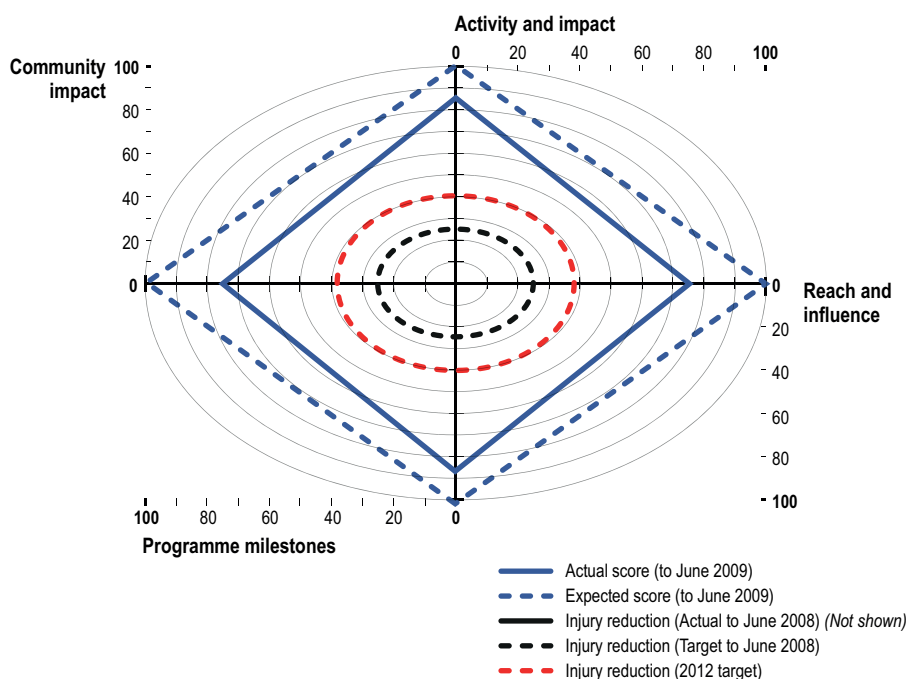
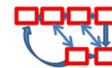
Due to the temporary unavailability of public sector data for 2008, the actual injury reduction achieved to date for all employers could not be reported in the June 2009 QPR, but is now available and will be reported in future editions of the QPR of SWSA. The reader is advised to check the SWSA website.²²

The solid blue quadrangle in the figure below shows actual performance to date on each KPA. The dashed line is the expected performance, which was 100% at the end of the June quarter 2009. Actual performance was below expectation for all axes: Programme milestones (84%), Reach and influence (78%), Community impact (76%) and Activity and impact (84%).

The average performance level across the four axes of the SWSA Scoreboard constitutes the overall contribution level of SWSA in the context of the State OHS Scoreboard (under development), which also reflects the performance of the State Ministerial Advisory Committee on OHSW, 'Employees and their representatives', 'Employers and their representatives', and 'Other contributors' (e.g. designers of the built environment and supply chain participants). The chart below is a mock-up of the State OHS Scoreboard.

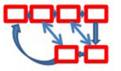
²¹ <http://www.safework.sa.gov.au/>

²² http://www.safework.sa.gov.au/show_page.jsp?id=6953

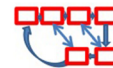


Key information for SafeWork SA

- 1 Overview of the organisational structure of the labour inspectorate:
 - (a) **The SWSA Executive team** (4 FTEs) with support from executive officers (4 FTEs) and Business Services (4FTEs), provides the senior management of SWSA.
 - (b) **Field and Front Line Services:** SWSA considers this to be its key interface with the workplace. It includes the OHSW (Safe Work) and IR (Fair Work) inspectorates organised into Response, Investigation, Prevention and Country teams, the Help and Early Intervention Centre and the Communications Unit.
 - (i) The **Response Team** (35 FTEs) is accountable for responding to notifiable incidents, dangerous occurrences and OHS complaints. The team also has specialist areas in mineral fibres, lifts, and civil construction. The team provides client services for reception, regulatory licensing, permissioning, and the registration of items of plant, design registration, asbestos, registered assessors and certificates of competency.
 - (ii) The **Investigation Team** (30 FTEs) has both OHSW and IR inspectors. The OHSW inspectors investigate all fatalities and significant incidents, along with investigations that are referred by the Response Team.
 - (iii) The **Prevention Team** (48 FTEs) carries out the day-to-day strategy activities and reports on these strategies. The team participates in the intervention development and implementation of prevention & compliance programs, audit tools, education & information forums, intervention process, intervention pilot strategies, feedback and evaluation.
 - (iv) The **Country Team** (26 FTEs) is responsible for enforcement of all legislation administered by SWSA in five country locations.
 - (v) The **Help and Early Intervention Centre (HEIC)** (19 FTEs) was established in 2006 to allow inspectors to focus on investigating more complex or serious workplace issues. It is a first point of contact for employers and employees.
 - (c) **Strategic Interventions Group:** (92 FTE) provides technical and specialist services and coordinates resources across SWSA to deliver industry, hazard and risk-based prevention and intervention programmes to workplaces. There are six teams in this group.



2 **Location of the SWSA offices:** SWSA is located at World Park A, 33 Richmond Road, Keswick, South Australia. In November 2010, the three previous, geographically separate metropolitan offices relocated to World Park. SWSA has regional offices in Port Pirie, Berri, Mount Gambier, Whyalla and Port Lincoln.



Austria: Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection (BMAK)

In early 2006 (phase 1), prior to the VEXAT (Austrian regulation on explosive atmospheres) entering into force, practically no explosion protection documents existed. After advice was provided in early 2006 (phase 1), a statistically relevant percentage of explosion protection documents could already be identified on the occasion of the inspection in late 2006 (phase 2). This trend has continued in the medium term. During the follow-up inspection in early 2009 (phase 3), the percentage of joineries in the sample having explosion protection documents was nearly 80% and about 100% for motor vehicle paint shops. This was proved not only for explosion protection documents but also for other partial aspects of explosion protection with roughly the same results.

Printed information, in contrast, in the context of a joint coordinated information campaign (e.g. the Austrian Workers' Compensation Board, the Labour Inspectorate, the Chamber of Labour, the Austrian Federal Economic Chamber, etc.) as carried out before launching the 2006 campaign, enables results to be achieved in a highly efficient manner. It is efficient because a clearly measurable improvement can be achieved with relatively little effort. The percentage of this improvement was up to 40% (phase 3).

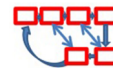
The clearly identifiable trends toward improvement as a result of advice (consultation inspection) or information may also be expected for other sectors or areas of occupational health and safety.

Austria was a member of the working group which developed the OECD *Guidance on Developing Safety Performance Indicators* ("Guidance on SPI")²³ to complement to the *OECD Guiding Principles for Chemical Accident Prevention, Preparedness and Response* (2nd ed. 2003) ("Guiding Principles").

These documents provide guidance to industry, public authorities and communities worldwide in their efforts to prevent and prepare for chemical accidents, i.e. releases of hazardous substances, fires and explosions. They contain best practices gathered from the experience of a wide range of experts, and has been internationally accepted as a valuable resource in the development and implementation of laws, regulations, policies and practices related to chemical safety. In Austria, as elsewhere, these requirements had been put into law. On July 1, 2006, the implementation deadline for specific amendments to the *Verordnung explosionsfähige atmosphären (VEXAT)*, which transposes Directive 1999/92/EC into national law, expired. This prompted the Austrian Labour Inspectorate to conduct an explosion protection campaign in 2006.

The concept of indicators can be used by an inspectorate to help determine whether OSH outcomes can be met. The conceptual model presented in this handbook speaks to the use of leading and lagging indicators (Section 5.7). Traditionally, an organisation's injury rates are used to help manage occupational health and safety (OHS) performance. This is known as a lagging indicator because the injuries have already occurred. A leading indicator is a measure of an organisation's ongoing health and safety initiatives, or of the workplace conditions leading to illness and injuries.

This case study from Austria describes how an explosion protection campaign applies the concept of a leading indicator in an important area relating to explosions in small and medium enterprises.



Setting the context

The Labour Market, Employment Law and Health and Safety Law are the foundations of the Austrian labour market policy. This policy articulates all the public measures designed to balance the supply and demand for workers to as great an extent as possible in an economically meaningful and sustainable way. The Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection (BMASK) is the government department accountable for implementation of this policy.

Occupational health and safety (OHS) is part of the labour market policy, and is divided into two major areas:

Safety at work and health protection

This area of OHS covers all the technical and occupational health regulations, including the Protection of Employees Act (the “Act”) and its regulations which constitute the basis for health and safety at work for employees in Austria.

Under the Act, both employers and employees have responsibilities:

- employers are responsible for ensuring that their staff work in accordance with health and safety regulations; and
- employees (all those who work as part of an employment relationship or training relationship, including temporary staff) have obligations to cooperate and adhere to the law.

Other legal provisions apply to those employed by the federal or provincial governments and local or municipal councils, in agriculture or forestry, in private households, and also to those who work from home.

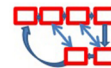
Employers are required to implement the general measures to prevent danger listed below when designing workplaces, work processes, when selecting and using working aids and materials, when deploying workers, and in all measures to protect employees.

- 1 Avoidance of risks
- 2 Assessment of risks which are not avoidable
- 3 Combating danger at its source
- 4 Taking the ‘human factor’ into account at work
- 5 Taking technological advances into account
- 6 Eliminating or reducing potential dangers
- 7 Planning the prevention of risks
- 8 Priority for general hazard protection before hazard protection for individuals
- 9 Issue of suitable instructions to employees

Protection of particular groups

This area of OSH covers the regulations for certain groups of employees who require particular protection such as children and young people or women, particularly pregnant women and mothers who are breast-feeding. It also covers regulations on working hours and rest days (including the special regulations for certain occupational groups, e.g. drivers).

The labour inspectorate is part of BMASK and is the largest statutory organisation dedicated to combating deficits in health and safety protection at work in Austria.



The labour inspectorate ensures the protection of the lives and health of working people by fulfilling its legal mandate and contributes towards:

- ▶ avoiding accidents and work-related illnesses;
- ▶ further development of safety at work and health protection;
- ▶ acceptance within society of the importance of occupational health and safety.

The Labour Inspection Act regulates:

- ▶ tasks;
- ▶ rights and obligations;
- ▶ competencies; and
- ▶ organisation of the labour inspectorate.

The Austrian Labour Inspectorate has 500 employees, of which 300 are inspectors. The labour inspectorate monitors compliance of the Act in 210,000 workplaces. There are approximately 2.4 million working people in Austria (2011 figures).

Applying the Performance measurement framework

The conceptual framework discussed in this handbook provides a visual representation of the links between the various stages of the framework which is a reminder that inputs, activities and outputs only make sense in relation to the outcomes that they are supposed to be influencing.

The conceptual framework provides a labour inspectorate with a systematic approach to the question of effectiveness:

To what extent does OSH improve as a result of a labour inspectorate's (LI) activities?

There are six steps in the performance measurement framework. The following sections discuss each step in the context of the case study provided by the Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection (BMASK).

Step I: Analyse the OSH situation

The performance measurement framework provides an approach which a labour inspectorate can use to think about the ultimate outcomes which need to be achieved.

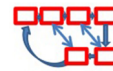
Step I in the framework is consideration of analysis of the OSH situation or identification of the OSH problem(s):

What problem or issue does the labour inspectorate need to address?

What needs to change so that OSH can improve?

Austrian Labour Inspectorate

In Austria, industrial accidents not only cause a great deal of suffering for those affected, they also result in economic costs (personnel cost, material costs, lost yield and turnover, court costs, a loss of image). Targeted health and safety measures aim to avoid the danger of accidents, occupational diseases, work-related illness and



permanent damage. One such targeted health and safety initiative was undertaken by the Austrian Labour Inspectorate.

In 2006, the labour inspectorate undertook to conduct an explosion protection campaign. The campaign was planned in the form of a random sample so that the result obtained could be extrapolated to the total population with calculable accuracy and reliability.

Two sectors were selected for this campaign based on a risk assessment regarding risk of explosions:

- (a) joinery establishments;
- (b) motor vehicle paint shops.

These account for approximately 5,700 enterprises in Austria.

Step II: Establish goal(s)

In order to establish a performance measurement process for a labour inspectorate (LI), it is important that the government level OSH goals/objectives are clearly established and are connected to the mission of the LI.

The OSH goals for governments are usually articulated in their vision, mission and goals.

A labour inspectorate will need to align its strategies with those of its government. Through implementation of its strategies, the labour inspectorate contributes to achievement of the OSH goals of the government.

Austrian Labour Inspectorate

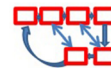
The two goals for the 2006 explosion protection campaign for joinery establishments and motor vehicle paint shops were to determine:

- (a) the explosion protection status in the sector concerned with regard to the main criteria (explosion protection document, zones, equipment in the zones, ventilation or extraction installations).
- (b) how establishments receiving advice and information from the labour inspectorate compared with establishments which received neither.

The campaign *Explosion Protection in SME*²⁴ in 2009 was designed to complement the 2006 campaign, in order to identify medium-term developments in this area.

Both campaigns were designed as a random sample studies in order to be able with relatively little effort to additionally extrapolate findings to the total study population of the specific sector in each case.

24 www.arbeitsinspektion.gv.at/NR/rdonlyres/73FCC803-471C-4D08-BAC6-28AFC8C368B3/0/VEXAT_Kurzbericht_EN_2011.pdf



Establish baselines and timelines for goals identified in Step II.

Performance can only be measured if there is something to which it can be compared. For this purpose, it is necessary for a LI to establish a baseline against which it can measure its progress.

In addition, for comparison purposes, a LI may choose to establish an external benchmark against which it can compare itself and its progress, for example, by looking at the achievements of other, similar SLI programs that are considered leaders in the field.

Austrian Labour Inspectorate

Joinery establishments

Prior to 2006, the number of explosion protection documents introduced was virtually zero or irrelevant in statistical terms.

Motor vehicle paint shops

Here too, there was virtually no statistically relevant introduction of explosion protection documents.

Step III: Allocate resources [inputs]

“Resources” are usually expressed in the number of staff and the budget allocated to a labour inspectorate. This is referred to as “input” to the activities undertaken to address the OSH situation.

Austrian Labour Inspectorate

The campaign was a major initiative of the labour inspectorate. The Austrian Labour Inspectorate has 500 employees, of which 300 are inspectors.

Step IV: Undertake activities

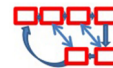
A labour inspectorate needs to develop strategies which are aligned with those of its government’s OSH goals. The labour inspectorate then implements its strategies through specific activities or operational strategies, thus, the labour inspectorate contributes to achievement of the OSH goals of the government.

Austrian labour Inspectorate

Activities conducted by the labour inspectorate included informing all the establishments in the selected sectors throughout Austria in detail by autumn 2006 of the explosion protection requirements. Information was provided directly by the labour inspectorate or through electronic means.

Sampling in 2006 was carried out in two phases:

- (a) **Phase 1** — Survey and advice by the labour inspectorate in 190 establishments and electronic information provided to an additional 190 establishments. The phase was conducted before the statutory transitional period for establishments to have an explosion protection document expired.
- (b) **Phase 2** — Survey in the 380 establishments which were informed and/or advised in Phase 1 and in the 190 establishments which were not advised or



informed by the labour inspectorate in Phase 1. This was conducted in autumn after the statutory transitional period for having an explosion protection document had expired.

Step V: Measure outputs

The direct products/services delivered, or activities undertaken, by a labour inspectorate is referred to as “output”. For example, the number of targeted inspections conducted annually by a LI. Usually, a labour inspectorate develops these specific activities as part of the overall OSH strategies which have been created to address the goals and targets set out in Step II.

Output (the activities expended by the LI) and resources used to undertake these activities provide the LI with a calculation of efficiency of the LI.

Austrian Labour Inspectorate

As was described earlier under Step II, the labour inspectorate set out to determine a) the explosion protection status in joinery and vehicle painting shops and b) how the establishments in these two sectors which received advice and information from the labour inspectorate compared with establishments which received neither.

All the establishments in the selected sectors throughout Austria were informed in detail by the labour inspectorate and other institutions by autumn 2006 (Phase 2).

For the whole of Austria, the results showed that, in the fall of 2006, for those enterprises to which information only (no advice) was provided:

- Between 19% and 39% of motor vehicle paint shops had an explosion protection document.²⁵
- Between 8% and 25% of joinery establishments had an explosion protection document.²⁶

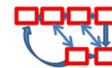
(a) Specific information about joinery establishments

Before Phase 1 (prior to the implementation deadline), the number of explosion protection documents (Ex-Doc) introduced was virtually irrelevant in statistical terms. It can be seen from the diagram that:

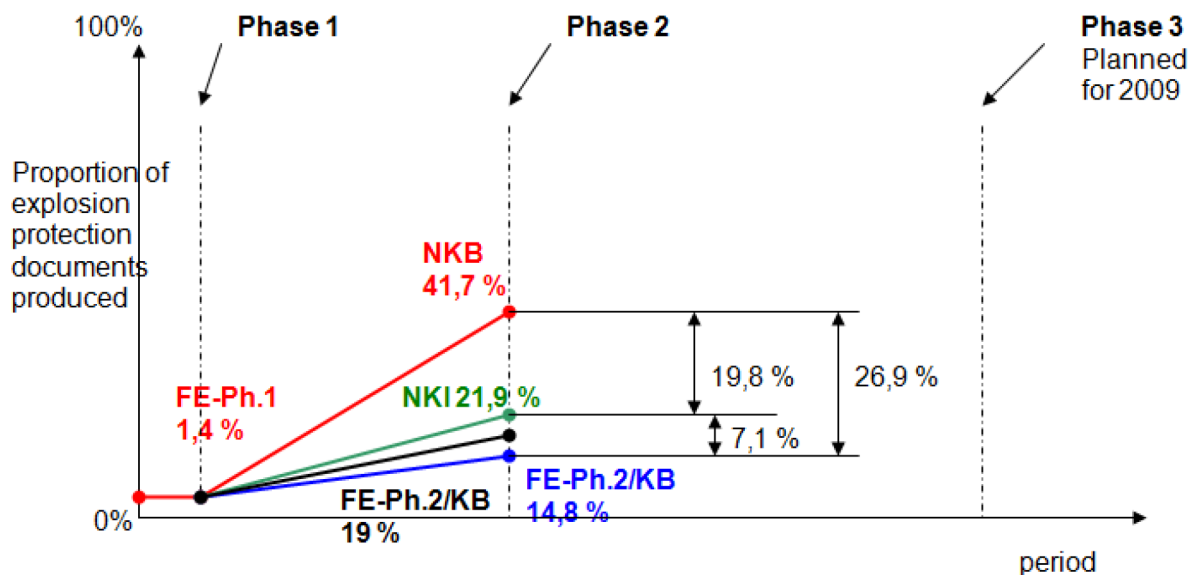
- The proportion of explosion protection documents introduced in establishments which were **advised** by the labour inspectorate is 41.7% (NKB) which is 19.8% higher than for the status group of establishments **informed** by the labour inspectorate (NKI – 21.9%) and 26.9% higher than for establishments which were not advised (KB – 14.8%)
- The impact of information and advice increases the proportion of explosion documents introduced by 25.5% (26.9% – 1.4%) for advice and by 5.7% (7.1% – 1.4%) for information.

²⁵ with a probability factor of 0.95.

²⁶ with a probability factor of 0.95.



Main diagram for joinery establishments - Proportion of explosion protection documents produced



Legend:

FE-Ph.1 Questionnaire survey Phase 1 of establishments which received neither advice nor information from the labour inspectorate.

NKB Follow-up control of groups receiving advice (which were advised by the labour inspectorate in Phase 1)

NKI Follow-up control of informed establishments (initial questionnaire survey of companies which were informed by the labour inspectorate in Phase 1)

FE-Ph.2/KB Questionnaire survey Phase 2 – no advice (random sample 63 establishments)^{*3}

FE-Ph.2/KB Questionnaire survey Phase 2 – no advice (random sample 81 establishments)^{*27}

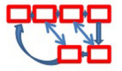
(b) Specific information regarding motor vehicle paint shops

Prior to the work of the labour inspectorate, motor vehicle paint shops had not developed or provided explosion protection documents.

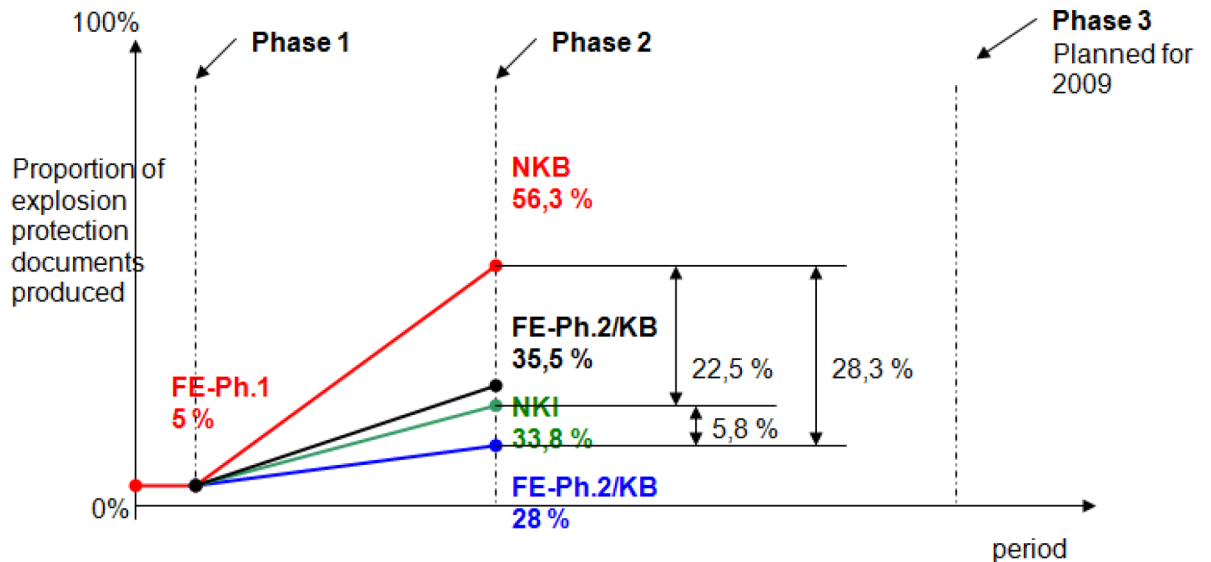
However, following the provision of information by the labour inspectorate the proportion of explosion documents introduced increased to between 28% – 56.3% in the various status groups, as can be seen from the diagram overleaf:

27 *Note: For the establishments which were not advised (FE.Ph2/Kb), two values were calculated: the random sample made up of the total number of establishments which were not advised was used to calculate the value of 14.8%. These were the establishments which received information from external institutions and those which did not receive any information.

The value was 19% for those that received information only from external institutions. Information from external institutions increased the number of explosion protection documents produced by 19% which is not significantly different, in statistical terms, from those receiving information from the labour Inspectorate (21.9%). No conclusion can therefore be drawn from this.



Main diagram for motor vehicle paint shops - Proportion of explosion protection documents produced



The proportion of explosion protection documents introduced in establishments which were **advised** by the labour inspectorate is 56.3% (NKB).

This proportion is significantly higher, namely 22.5% higher than for the status group of establishments **informed** by the labour inspectorate (NKI – 33.8%) and 28.3% higher than for establishments which were not advised (KB – 28%).

Information from external institutions increased the number of explosion protection documents produced by 35.5% which is not significantly different, in statistical terms, from those receiving information from the labour inspectorate (33.8%). No conclusion can therefore be drawn from this. It should be noted that advice by labour inspectors resulted in twice as many documents being produced as in the case of information (41.7%).

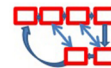
Step VI: Measure outcomes

Measuring outcomes is a measure of program effectiveness. The question of “is the LI effective in meeting the goals, objectives and targets as set out in Step II?” is answered by measuring outcomes. These outcomes are often measured in “rate” for example the “rate of reduction of injuries or absence from work, per worker population” against the targets set out in Step II (above).

Austrian Labour Inspectorate

The Austrian Labour Inspectorate undertook a campaign to advise and inform SME in the two areas of joinery and vehicle painting, of their requirements to protect their employees from explosions. Based on the research regarding leading indicators, the extent to which technical information and advice have been provided to employees is a leading indicator of increases OHS in workplaces.

The outcomes of the campaign conducted by the Austrian Labour Inspectorate with the joinery and motor vehicle painting enterprises are summarised below:



1 Information and advice: what effect do they have?

Both information and advice increase the extent to which explosion protection is implemented. It was also found that the extent to which implementation increased depended on whether the measures were geared to documentation or on-site implementation. It should be noted that increased implementation was achieved despite the complexities of explosion protection. This suggests that information and advice from the labour inspectorate can always be expected to markedly increase the degree of implementation of technical employee protection as a whole.

2 Explosion protection for workers (in-house information and training)

Establishments which produce an explosion protection document have informed and trained their employees. In most establishments which have not prepared an explosion protection document, no training or information of workers was carried out.

It can therefore be inferred that workers are trained and given information about explosion protection only if their employers have come to grips with the problem in terms of identifying, assessing and documenting the risks. It is therefore assumed that information and training in technical employee protection is given only when employers are aware of the risks and how to eliminate them.

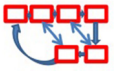
The results of the 2006 campaign showed that on-site advice by labour inspectors was clearly more effective than no advice or information. Advice by labour inspectors resulted in twice as many documents being produced as in the case of information. The data calculated were valid for the random sample. They would apply for the total population if all establishments – and not only the establishments in the random sample – had actually been given advice.²⁸

The short-term trends identified in 2006 were confirmed through the 2009 campaign *Explosion Protection in SME*.²⁹ On the basis of the campaigns in 2006 and 2009, the following findings have been identified:

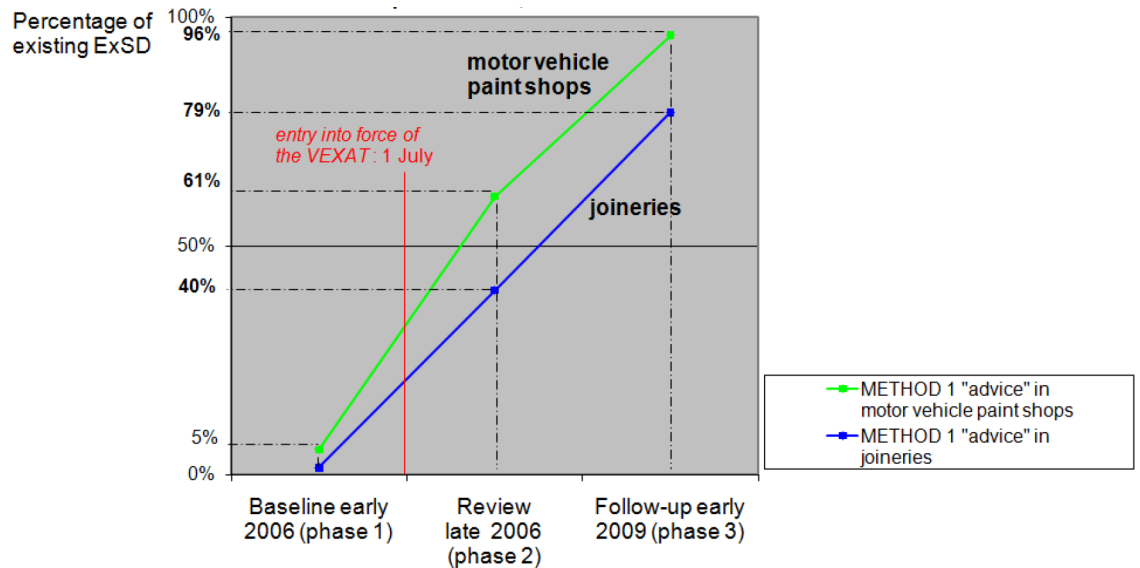
- (a) Compact information, wherever possible provided jointly with other institutions (e.g. as part of the Health and Safety at Work Strategy scheme) is an efficient method for improving occupational safety and health at businesses.
- (b) Compact information from the labour inspectorate, particularly when potential inspections are simultaneously announced, is also an efficient method for improving occupational safety and health at businesses.
- (c) Advice with inspection (consultation inspection) or focused campaigns over a longer period of time are effective. Due to the considerably greater amount of effort required when compared to compact information campaigns, consultation inspection campaigns are recommended in particular for sectors in which an increased risk exists.

28 Conclusions were drawn for the total study population, where statistically relevant and while stating quantifiable levels of accuracy and reliability, on the basis of the random sample study. A statistically meaningful quantity of businesses was selected using a random number generator. The random number generator, developed in compliance with the most state-of-the-art technical requirements for statistical techniques, was provided by Prof. Neuwirth. The accuracy level of the partial findings derived from the random sample is specified at approximately 10% when applied to the campaign as a whole. The total study population includes all of the approx. 5,700 potentially relevant businesses (in this case within the joinery and motor vehicle paint shop sectors in Austria). The sample includes only a small portion of the total study population, selected randomly.

29 http://www.arbeitsinspektion.gv.at/NR/rdonlyres/73FCC803-471C-4D08-BAC6-28AFC8C368B3/0/VEEXAT_Kurzbericht_EN_2011.pdf



Percentage of explosion protection documents (ExSD) in motor vehicle paint shops and joineries. Method 1: "advice" in phases 1, 2 and 3.



Key information for the Austrian Labour Inspectorate³⁰

The labour inspectorate is part of the Federal Ministry of Labour, Social Affairs and Consumer Protection and includes offices in all Austrian provinces. The broad area of responsibility requires sound technical, occupational health and legal knowledge. Most of the employees have a higher technical education. In the first two years of service, all employees take part in training courses in the fields of law, technology, medicine and communications work and then put off a final exam. Continuous learning and gaining experience in securing the premises and extend these high professional standards, social and communication skills allow for a focused and constructive action in various areas of conflict.

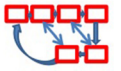
The labour inspectorate raises awareness about issues of safety and health at work and monitors compliance with statutory provisions for protection of life and health of working people in the workplace by:

- ▮ providing information and advice legally binding and free of charge in all aspects of occupational safety and health at work;
- ▮ mediating the conflicting interests at work;
- ▮ investigating accidents at work and complaints;
- ▮ being involved in national and international projects in the field of workplace health and safety;
- ▮ provide information and training of OSH managers through lectures, seminars and discussions.

The labour inspectorate enforces the following legislation and regulations:

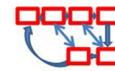
- ▮ the use of dangerous machines and tools;
- ▮ the handling of hazardous substances such as toxic or flammable chemicals;
- ▮ impacts of operations and other impacts such as noise;
- ▮ facilities for the prevention, teaching and research;
- ▮ the design of workplaces, work rooms and sanitary facilities;
- ▮ the working conditions of young people and pregnant women;
- ▮ working time and rest.

30 <http://www.arbeitsinspektion.gv.at/AI/default.htm>



In their activities, ranging from operational controls to participation in information sessions, the labour inspectorate works with the following groups of people and institutions:

- ▶ employees, safety representatives and works councils;
- ▶ operations and planning companies;
- ▶ prevention specialists and prevention centres;
- ▶ chambers, trade unions and professional associations;
- ▶ Social Insurance and Employment Service;
- ▶ research, testing and counselling centres, training facilities;
- ▶ Transport Labour Inspectorate, mining authorities, agriculture and forestry inspection;
- ▶ other authorities such as district administrative authorities, planning authorities and security agencies.



Canada: Ontario Occupational Health and Safety System (OSHCO)

Setting the context

The province of Ontario is in Canada, and its occupational health and safety system includes the Ontario Ministry of Labour, the Workplace Safety and Insurance Board (WSIB) and health and safety associations designated under the Workplace Safety and Insurance Act (WSIA, 1997).

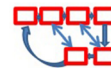
In January 1998, the Ministry of Labour released a paper entitled *Preventing Illness and Injury: A Better Health and Safety System for Ontario Workplaces*. This paper outlined a plan to enable the ministry, WSIB and HSAs to work as partners – to make better use of resources, eliminate overlap and develop a more integrated and collaborative system to improve workplace health and safety. The partners came together in 2002 to form the Occupational Health and Safety Council (OHSCO). In 2009, OHSCO was no longer needed because leadership for OSH prevention was consolidated into the Ministry of Labour along with the health and safety associations.

The roles and mandates of each partner are summarised below. All have the common goal of preventing occupational injuries and illnesses:

- (a) The Ministry of Labour's mandate is to set, communicate and enforce workplace standards for occupational health and safety while encouraging greater workplace self-reliance.
- (b) The Workplace Safety and Insurance Board (WSIB) is an arm's length agency of the Ministry of Labour. The Board is funded by premiums collected from employers. The WSIB compensates injured workers and the survivors of deceased workers. The Board assists injured workers in the early and safe return to work. Under provisions in the Workplace Safety and Insurance Act (WSIA), the WSIB funds the province's occupational health and safety system and oversees the province's occupational health and safety education and training programs and services.
- (c) As of January 1, 2010, there are six health and safety associations (HSAs) in Ontario, enabled under the WSIA. They provide a range of occupational health and safety support services to employers and workers. Funding for these organisations is provided in part by the WSIB from premiums collected from employers.
- (d) Four of the six associations, structured to serve specific industries or sectors of the economy, develop and deliver education and training programs, conduct workplace audits and provide consultation and technical services to workplaces. The Workers' Health and Safety Centre, the fifth association, is designated as a training centre under the WSIA and develops and delivers training programs on a variety of workplace hazards and issues, applicable to all sectors of industry.
- (e) The Occupational Health Clinics for Ontario Workers, the sixth association, is a network of five clinics across Ontario. These clinics are staffed by a multidisciplinary team of health professionals who provide a range of services, including diagnosis of work-related illness and injuries, promotion of prevention strategies and research services.

There are approximately 6.5 million workers in Ontario. Approximately 10% of the Ontario labour force is under the jurisdiction of federal labour legislation.

In 2003, Ontario had approximately 350,000 workplaces representing 21 sectors, e.g. construction, manufacturing, mining & forestry, service industry.



Step I: Analyse the OSH situation

The performance measurement framework provides an approach which a labour inspectorate can use to think about the ultimate outcomes which need to be achieved.

Step I in the framework is consideration of analysis of the OSH situation or identification of the OSH problem(s):

What problem or issue does the labour inspectorate need to address?

What needs to change so that OSH can improve?

Ontario Occupational Health and Safety System (OSHCO)

Problem 1:

In 2003, the injury rate was one of highest in Canada:

- ▀ Despite over 48,000 health and safety inspections annually, Ontario had > 104,000 injuries at work and the number of injured workers had increased by 51% since 1995.

Problem 2:

The existing enforcement strategy wasn't working:

- ▀ The rate of reduction of workplace injuries had reached a plateau.

Problem 3:

- ▀ Injury rates were increasing in manufacturing, retail, health and social services; these sectors employ 38% of workers however, they account for 50% of total injuries in Ontario workplaces.

Problem 4:

- ▀ Number of smaller, non-traditional, less experienced workplaces were finding it difficult to understand the regulations, and training requirements as there are over 200 nationalities in the capital city of Ontario (Toronto).

Problem 5:

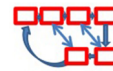
- ▀ The enforcement program of the labour inspectorate did not factor in severity and costs to worker safety; the program measured activities (e.g. numbers of inspections) not outcomes or results.

Step II: Establish goal(s)

In order to establish a performance measurement process for a labour inspectorate (LI), it is important that the government level OSH goals/objectives are clearly established and are connected to the mission of the LI.

The OSH goals for governments are usually articulated in their vision, mission and goals.

A labour inspectorate will need to align its strategies with those of its government. Through implementation of its strategies, the labour inspectorate contributes to achievement of the OSH goals of the government.



Ontario Occupational Health and Safety System (OSHCO)

In 2003, the goal of the Ontario government was:

- ▶ A more prosperous Ontario.

For the same year, the goal for the Ministry of Labour was:

- ▶ Safer, fairer and healthier workplaces and a competitive economy.

In support of the Ministry of Labour, the goal of the Labour Inspectorate was:

- ▶ Safer and healthier workplaces through effective, efficient enforcement.

Establish baselines and timelines for goals identified in Step II

Performance can only be measured if there is something to which it can be compared. For this purpose, it is necessary for a LI to establish a baseline against which it can measure its progress.

In addition, for comparison purposes, a LI may choose to establish an external benchmark against which it can compare itself and its progress, for example, by looking at the achievements of other, similar SLI programs that are considered leaders in the field.

Ontario Occupational Health and Safety System (OSHCO)

OSHCO developed an integrated strategy and embarked on the goal to reduce workplace injuries by 20% in four years (2004–2008) thereby also avoiding over \$960M in costs to employers.

The strategy baseline lost-time injury rate (2003) was 2.3 injuries per 100 workers.

The strategy was built on principles of maximum alignment of resources, on a risk assessment methodology, implemented through the network of OSHCO.

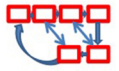
Over the period 2005–2010 there have been three prominent strategic plans. The Ministry of Labour implemented the ‘High Risk Firm’ strategy over the period 2004–2008, which was followed by the current Ministry framework, termed ‘Safe at Work Ontario’. Separately, but in the spirit of alignment, the Workplace Safety and Insurance Board adopted a five year strategic plan for the period 2008–2012, titled ‘the Road to Zero’, that defined occupational health and safety as one of four ‘business fundamentals’ to guide the priorities of the WSIB over this period.

Step III: Allocate resources [inputs]

“Resources” are usually expressed in the number of staff and the budget allocated to a labour inspectorate. This is referred to as “input” to the activities undertaken to address the OSH situation.

Ontario Occupational Health and Safety System (OSHCO)

The Ministry of Labour’s ‘High Risk Firm’ strategy (2004–2008) applied a doubling of the number of labour inspectors (from 200 to 400, representing an additional annual



expenditure of \$25 million) to the targeting of enforcement activities to the poorest performing Ontario employers.

The total budget of the labour inspectorate was approximately \$50 Million (C\$) and for the Ministry of Labour Occupational Health and Safety Program³¹ \$89.65 Million (C\$).

OHSCO provided leadership and guidance within the Ontario prevention system to achieve its strategic vision, mission and purpose. Annual expenditures in the Ontario prevention system for labour inspection services, worker training and workplace consulting was \$245M in 2008. OHSCO oversaw the production of annual performance reports on the Prevention System and prepared seven reports for the period 2003–2008.

Step IV: Undertake activities

A labour inspectorate needs to develop strategies which are aligned with those of its government's OSH goals. The labour inspectorate then implements its strategies through specific activities or operational strategies, thus, the labour inspectorate contributes to achievement of the OSH goals of the government.

Ontario Occupational Health and Safety System (OSHCO)

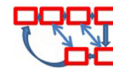
In 2004, the Ministry of Labour led the design and implementation of the 'high risk firm' initiative. Under this program, the poorest performing 10% of Ontario workplaces (30,000 enterprises) were selected annually for either intensive labour inspection attention (up to four inspection visits per year) or for targeted services from the health and safety associations. These workplaces accounted for 40 per cent of all lost-time injuries and claims costs.

Of the total number of 30,000 workplaces targeted under this initiative, the Ministry of Labour Inspectorate focused on 6,000 enterprises, while the safe workplace associations worked with 24,000 enterprises.

Also the Ministry of Labour conducted the following activities:

- Raise awareness of the importance of preventing ergonomic-related injuries such as back pain, muscle strain and tendonitis, which account for 42 per cent of all lost-time injuries in Ontario.
- Maintain its focus on new and young workers to reduce their vulnerability to workplace injury.
- Target additional resources towards the health care sector in order to improve workplace health and safety in response to the findings of the Campbell Commission on SARS.
- Work closely with the WSIB and other health care partners over the longer term to explore ways in which all workplace injuries can be reduced.

31 http://www.labour.gov.on.ca/english/about/pubs/rbp/2008/rbp_7.php



Based on the success of the *High Risk Firm* initiative (summarised in the outcomes below) and based on learnings during this period, in 2008 the Ministry of Labour launched a revised compliance strategy, *Safe at Work Ontario*, which targets inspections on the basis of lost-time injury claims and costs, compliance history of an employer, and hazards inherent to the sector, as well as other factors unique to an enterprise. Annual planning for the selection of enterprises for targeted enforcement by the Ministry of Labour, the WSIB or the health and safety associations is coordinated by the Ministry of Labour to ensure that there is minimal risk of duplication and that the insights of regional field staff are incorporated in the final selection of targeted employers.

As a prevention system partner, the WSIB's strategy, *Road To Zero* incorporated a focus on occupational health and safety, by:

- creating a national habit of safety;
- greater alignment of prevention partner activities to lead to improved outcomes;
- instilling an evidence-based, priority-focused, and outcome-measurement mindset throughout the prevention system;
- developing prevention partner capabilities, information management tools, and communications technology.

Step V: Measure outputs

The direct products/services delivered, or activities undertaken, by a labour inspectorate is referred to as "output". For example, the number of targeted inspections conducted annually by a LI. Usually, a labour inspectorate develops these specific activities as part of the overall OSH strategies which have been created to address the goals and targets set out in Step II.

Output (the activities expended by the LI) and resources used to undertake these activities provide the LI with a calculation of efficiency of the LI.

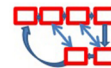
Ontario Occupational Health and Safety System (OSHCO)

Based on the targeted initiative described above, along with an increase in the inspectorate, outputs³² for the period between 2004 and 2008 are as follows:

- Visits by labour inspectors to enterprises increased from 52,673 (2004/05) to 101,275 (2007/08).
- Inspections increased from 34,530 (2004/05) to 66,230 (2007/08).
- Investigations increased from 16,202 (2004/05) to 25,430 (2007/08).
- Prosecutions increased from 618 with \$7M (C\$) in fines to 1191 with \$12M(C\$) in fines.

In 2008, the MOL issued 2.6 orders of non-compliance per 100 workers covered by the Occupational Health and Safety Act, a 64% increase relative to the rate of 1.6 orders per 100 workers issued in 2004. The frequency of convictions per 100,000 OHS-covered workers increased from 6.1 in 2004 to 22.1 in 2008. This increase in inspection and enforcement activity reflects the outcome of additional resources allocated to the Ministry of Labour's Occupational Health and Safety Branch for the recruitment of 200 additional inspectors in 2005.

32 Performance Measurement Report 2008, Occupational Health and Safety Council of Ontario (OHSCO), March 19, 2010



Knowledge and skill transfer activities

OHSCO member agencies provided about 274,000 participant-days of training/ education services in 2008 through in-classroom and in-field training, confirmed self-directed training, awareness sessions and conferences. This represents 4.1 participant-days of training per 100 Ontario workers. In addition, 327,000 participant-units of training materials were distributed and 13.4 M website pages with prevention content were viewed.

There was further knowledge transfer through 183,000 hours of consulting and advising. This represents 2.8 hours per 100 Ontario workers. About 21% of this activity was directed to firms targeted through the *Last Chance* initiative.

Over 2006–08, a total of 70,941 people passed the Part One certification test, yielding a ratio of 1.1 people passing per 100 workers in 2008.

Additional enforcement statistics are available online.³³

Step VI: Measure outcomes

Measuring outcomes is a measure of program effectiveness. The question of “is the LI effective in meeting the goals, objectives and targets as set out in Stage II?” is answered by measuring outcomes.

These outcomes are often measured in “rate” for example the “rate of reduction of injuries or absence from work, per worker population” against the targets set out in Step II (above).

Ontario Occupational Health and Safety System (OSHCO)

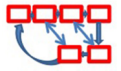
Monitoring the effectiveness of prevention services

Beginning with a report for 2003, the Occupational Health and Safety Council of Ontario (OHSCO) has published an annual report describing the resources, activities and outcomes of the Ontario prevention system (those agencies and activities funded by insurance premiums collected by the WSIB). These reports document Ministry of Labour inspection and enforcement activity and describe the activities of the health and safety associations in aggregate.

In order to report on the outcomes of the occupational health and safety system in Ontario, a performance measurement framework was developed through the following process:

- a literature review of performance measures frameworks relevant to the OHSCO mandate;
- the development of a program logic model;
- a consensus process to identify relevant indicators of key concepts in the program logic model, including a survey of OHSCO member preferences for performance concepts;
- final selection of performance concepts.

33 <http://www.labour.gov.on.ca/english/hs/pubs/enforcement/index.php>



The performance measurement framework is presented in Figure 1. The model proposes the measurement of inputs, activities, reactions and outcomes. Table 2 presents the 21 initial performance measurement concepts and highlights in bold the final set of ten performance measurement concepts adopted for the System Performance Measurement report.

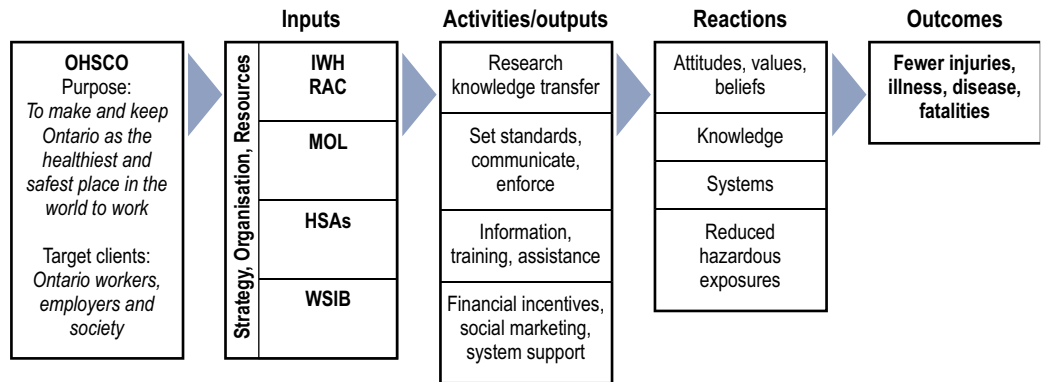


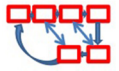
Figure 1

The aims of the System Performance Measurement report were to:

- serve as a “high-level” performance monitoring tool;
- synthesise data collected from various sources;
- support the development of a common view of the system by OHSCO members;
- assist with OHSCO strategy development and planning;
- suggest gaps in current data collection; and
- suggest gaps in current knowledge about the Prevention System, by highlighting trends or indicating relationships for which there is not current understanding.

Outcomes achieved

- The frequency of lost-time claims per 100 workers in Ontario has declined from 2.6 in 2000 to 1.7 in 2008, a reduction of approximately 5% per year over this period. Over the period 2000–2007, the frequency of absence from work for seven days or longer for work-related causes, based on workers’ self-reported survey responses, declined by approximately 0.8% per year. The year-over-year reduction in lost-time claims between 2007 (80,863) and 2008 (78,256) represents a 3.5% reduction.
- Over 2000–08, the rate of decline of lost-time claims for musculoskeletal disorders has on average been less than for all injuries and illnesses (4.6% vs 5.2% per year). However, over 2007–08, the rate of decline of MSD claims was greater than that for all claims. Correspondingly, MSD claims as a percentage of all claims showed a slight decline from 43.7% to 43.3%.
- Traumatic fatalities per 100,000 workers have declined by 5.8% per year over the period 2000–08.
- From 2003–08, the claim rate for 15–19 year olds declined to a greater extent than for 25–44 year olds (10.4% versus 7.6% per year).



Logic model domain	Performance measurement concept*	Per cent respondents rate concept as 'very important'	Average score on importance scales†
Input	Monetary resources	50	3.2
	Legislation and regulations	30	3.2
	Information systems availability	10	2.8
	HR quality	0	2.2
Activities/ outputs	Enforcement quantity and quality	50	3.2
	System alignment	50	3.2
	Knowledge/skills transfer quantity and quality	40	3.1
	Product/programme development	30	3.1
	System efficiency	20	2.9
	Research quantity and quality	20	2.9
	System standard/guideline setting quality	20	2.8
	Social marketing effort and magnitude of impact	20	2.7
	Financial incentives effectiveness/reach	0	2.3
Reactions	Workplace parties' OHS values, beliefs and attitudes	40	3.3
	Hazardous exposures	20	3.2
	Workplace parties' knowledge and skills	20	3.0
	Workplace parties' satisfaction with the prevention systems	44	2.8
	Occupational health and safety management system	20	2.8
Outcomes	Occupational injuries, illnesses, disabilities and fatalities	90	3.8
	Cost (of illnesses, injuries and fatalities)	40	2.9
	Return-to-work safety	40	2.8

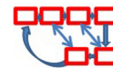
*Concepts in bold text were retained in the final performance measurement framework.

†Scores were 1 (not important), 2 (somewhat important), 3 (important) and 4 (very important).

Since the targeted enforcement strategy was launched in 2004–05, the Ministry has achieved the following:³⁴

- approximately 54,000 lost-time injuries were avoided;
- the lost-time injury rate has been reduced to 1.8 per 100 workers, from 2.2 entering 2004–05;
- WSIB costs of an estimated \$1.053 billion have been avoided.

34 July 2008: http://www.labour.gov.on.ca/english/about/pubs/rbp/2008/rbp_3.php



Denmark: Danish Working Environment Authority (WEA)

Setting the context

The Danish Working Environment Authority (WEA) operates under the auspices of the Danish Ministry of Employment and is responsible for the simple yet enduring principle that those who create risk are best placed to manage it. The WEA helps to ensure a safe, healthy and constantly improving working environment through effective supervision, appropriate regulation and information.

The WEA enforces the Working Environment Act which was passed in 1999. The most recent amendment to the Act [2004] stipulates, among other things:

- ▶ screening³⁵ of the working environment of all Danish enterprises within a period of seven years;
- ▶ an obligation for enterprises to seek consultancy advice; and
- ▶ introduction of a “smiley scheme” to illustrate the state of working environment of the enterprises.

There are certain sectors for which regulation and enforcement have been devolved to other authorities:

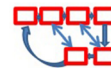
- ▶ The Danish Energy Agency is responsible for supervision of off-shore installations.
- ▶ The Danish Maritime Authority is responsible for supervision of shipping.
- ▶ The Danish Civil Aviation Administration is responsible for supervision in the aviation sector.

If the Danish Working Environment Authority (WEA) finds that occupational health and safety legislation is being flouted, there are various sanctions it may impose. The WEA drafts Executive Orders and instructions, in cooperation with labour market partners. These are binding on citizens and any violation of the rules is therefore subject to legal sanctions. In addition, WEA guidelines describe how the regulations laid down in Danish working environment legislation are to be interpreted. WEA guidelines are not, in themselves, binding on citizens; they are, however, based on regulations (Acts and Executive Orders) that are binding. The WEA will take no further action in situations where an enterprise, for example, has acted in accordance with the relevant WEA guidelines.

WEA also coordinates cooperation with the European Agency for Safety and Health and Work.

In Denmark the number of enterprises with employees is approximately 160,000 and there are about 200,000 self employed. The total number of employees is about 2,850,000.

35 The screening visits are expected to be abolished as of January 2012 due to a March 2011 parliamentary agreement, soon to be finalised into an amendment to the Working Environment Act.



Step I: Analyse the OSH situation

The performance measurement framework provides an approach which a labour inspectorate can use to think about the ultimate outcomes which need to be achieved.

Step I in the framework is consideration of analysis of the OSH situation or identification of the OSH problem(s):

What problem or issue does the labour inspectorate need to address?

What needs to change so that OSH can improve?

Danish Working Environment Authority (WEA)

Over a 10 year period, from 1995 to 2005, the national priorities included seven areas within the working environment: Fatal and other serious accidents, carcinogenic and CNS-damaging chemicals, children and young people, heavy lifting and monotonous repetitive work, hearing damaging noise, psychosocial factors and indoor climate.³⁶ These priorities were further focused in the period from 2002–2005, where a special focus was put on the following four areas: psychosocial factors, accidents, heavy lifting and monotonous repetitive work.

From 2006 to 2011, the national priorities included four areas within the working environment: occupational accidents, psychological working environment, noise and musculoskeletal disorders.

The general assessment of the OSH situation in Denmark has been based on monitoring seven areas under the action program called “Clean working environment 2005”. Until 2010, these areas were:

- fatal and serious accidents;
- work-related exposure to carcinogenic substances;
- injuries sustained by children and adolescents;
- injuries caused by heavy lifting and illnesses due to monotonous repetitive work;
- health injuries due to psychosocial risk factors;
- diseases and problems caused by indoor climate;
- hearing damages.

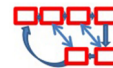
In 2008,³⁷ it was estimated that one-third of sickness-related absenteeism in Denmark is due to problems with the working environment.

Every year approximately 40,000 industrial accidents and 12,500 work-related health problems are reported to the WEA. It should be noted that incidents resulting in the loss of one working day must be notified. This factor partly explains the emphasis given to dealing with the psychosocial and muscular-skeletal issues, as these factors account for a relatively high proportion of sickness-related labour absenteeism.

³⁶ <http://www.at.dk/sw12419.asp>

³⁷ 2008 SLIC Evaluation:

<http://arbejdstilsynet.dk/~media/at/at/12-engelsk/slic/slic-report-evaluation-denmark-2008%20pdf.ashx>



Step II: Establish goal(s)

In order to establish a performance measurement process for a labour inspectorate (LI), it is important that the government level OSH goals/objectives are clearly established and are connected to the mission of the LI.

The OSH goals for governments are usually articulated in their vision, mission and goals.

A labour inspectorate will need to align its strategies with those of its government. Through implementation of its strategies, the labour inspectorate contributes to achievement of the OSH goals of the government.

Danish Working Environment Authority (WEA)

Priorities and targets are set by the government – with recommendations from the Working Environment Council and hearing of the stakeholders. For the period 2006–2010 the report *Working Environment of the Future* was the foundation for decisions on which working-environment problems and issues should be in focus. The documentation report was prepared by the Working Environment Authority, the National Institute of Occupational Health, and the National Board of Industrial Injuries. In March 2011, the WEA developed a *Strategy for the working environment towards 2020*.³⁸

Danish government vision:

“Denmark 2020 – Knowledge > growth > prosperity > welfare” which articulates 10 broad goals for 2020 covering all areas of Danish society and which sets direction for all Danish government ministries.

Mission of the WEA

To contribute to a safe, healthy and stimulating working environment through effective inspection, targeted regulation and information.

Goals of the WEA labour inspectorate

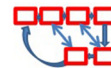
- to focus on the most important working environment problems; and
- to target efforts towards enterprises with a problematic working environment.

Establish baselines and timelines for goals identified in Step II

Performance can only be measured if there is something to which it can be compared. For this purpose, it is necessary for a LI to establish a baseline against which it can measure its progress.

In addition, for comparison purposes, a LI may choose to establish an external benchmark against which it can compare itself and its progress, for example, by looking at the achievements of other, similar SLI programs that are considered leaders in the field.

38 <http://arbejdstilsynet.dk/~media/at/at/12-engelsk/rapporter/2020%20engelskpdf.ashx>



Danish Working Environment Authority (WEA)

Quantitative goals for the development of the WEA set at the political level.

In March 2011, the WEA developed a *Strategy for the working environment towards 2020* (March 2011) which supports the government's vision articulated in "Denmark 2020".

In this strategy, the WEA has three main goals, (using a baseline of 2011 and a timeline to 2020):

- 1 25% reduction of severe work accidents;
- 2 20% reduction in the proportion of the workforce exposed to excessive psychosocial strain;
- 3 20% reduction in the proportion of the workforce exposed to excessive muscular-skeletal strain.

The activities of WEA are supposed to contribute to the overall goals, but the responsibility is shared with the companies, the social partners etc.

Step III: Allocate resources [inputs]

"Resources" are usually expressed in the number of staff and the budget allocated to a labour inspectorate. This is referred to as "input" to the activities undertaken to address the OSH situation.

The Danish Working Environment Authority has approximately 750 employees.

Step IV: Undertake activities

A labour inspectorate needs to develop strategies which are aligned with those of its government's OSH goals. The labour inspectorate then implements its strategies through specific activities or operational strategies, thus, the labour inspectorate contributes to achievement of the OSH goals of the government.

Danish Working Environment Authority (WEA)

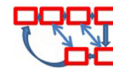
Key Strategies of the WEA³⁹

The Danish Working Environment Agency (WEA) *Strategy for the working environment towards 2020* and activities focus to achieving maximum impact.

The strategy and its goals guide the WEA with respect to:

- the choice of specific activities that should be evaluated;
- the main questions that should be investigated;
- how and when can the results be utilised in the decisions processes of WEA?

39 Action Programme for a Clean Working Environment 2005



In the strategy, an important distinction is made between evaluations with the primary purpose to *document goal achievement*, versus evaluations with a learning perspective, i.e. evaluations that investigate the *causes-effect relationships* at work within a specific activity. The former type will mainly be quantitative evaluations, whereas the latter must often use qualitative methods to clarify which mechanisms that are functioning.

It is agreed that impact of WEA's current efforts can not alone be measured by means of a general measurement of developments in OSH.

The impacts are influenced by a number of general developments, such as population lifestyle developments, technical/social trends, economic trends, etc.

General statistics for reported industrial accidents and work-related diseases do not measure direct impacts of WEA's efforts, as the causes of work-related diseases often go a long way back in time.

One basic tool for evaluating or measuring the performance of WEA is the *impact ladder*.

The impact ladder

Rung 7: Improved health indicators, e.g. reduced sick leave

Rung 6: Reduction in the rate of industrial accidents and work related diseases

Rung 5: Reduction in exposures, including risks of accidents

Rung 4: Improved (safer) production technology and safer work processes

Rung 3: Improvements in the companies' own OSH management

Rung 2: Changes in the attitudes at the workplaces

Rung 1: Changes in the knowledge at the workplaces

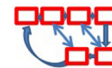
The impact ladder was developed on the basis of an analysis of impact measurement methods in the Nordic countries. It consists of a number of variables that establish a system for the levels at which goals are defined and impacts are measured.

The impact ladder shows that goals for impacts on health and safety at enterprises can be defined at many levels, ranging from increasing the knowledge of the target group and improving their behavior to ameliorating the health of employees.

The instruments available to WEA can only address rungs 1 to 5 directly, even if the long-term goal is to impact the accident rate and workers' health.

Therefore, the direct impacts of WEA's intervention activities in relation to a working environment problem are mainly measured at rungs 1 to 5, whereas other impacts depend on the response from the enterprises, i.e. whether they choose an effective solution.

Overall, political goals are often laid down at rungs 6 and 7, whereas the most precise instrument of WEA – the improvement notice – is most often aimed at rung 3 (e.g. the OSH management) and rung 5 (reduction in exposure). However, the ladder also shows a chain of **cause of actions** at enterprises which are important to take into account in the practical design.



The measurement problem can be simplified by choosing to measure the direct impacts on the rungs that correspond to the specific WEA activity and the instruments available during inspection (i.e. rungs 1 to 5). This may be sufficient if the purpose of the evaluation is only to evaluate which instruments are most appropriate.

WEA wish to show that it is contributing to the overall goals.

In order for performance measurement to relate to this, it must be made plausible that the efforts and instruments of the Danish WEA actually trigger the chain of cause that may culminate in achievement of the overall goals.

This is possible if there is general health and safety documentation for the effectiveness of these interventions, with respect to influencing the rate of accidents or health (rungs 6 to 7). If the causal chain between this type of risk reduction at (e.g.) rung 5 and effects at rungs 6 and 7, then it will also be legitimate to only evaluate whether the Danish WEA's activity is reducing risks at rung 5.

Operational strategies of the Danish WEA:

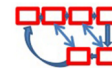
- **Screening:** a quick review of the working environment at the enterprise with a view to assessing whether it should be subjected to adapted inspection.
- **Adapted inspection,** in which the Danish Working Environment Authority targets its resources on the enterprises which have the most hazardous working environment conditions. These inspections are mostly proactive (preventative workplace visits) and system inspections/audits are applied.
- **Detailed inspection** takes the form of inspection of problems or problem areas, including construction site inspections, investigation of work-related accidents, diseases and ailments.

The WEA has put a particular focus on monitoring the development in the seven vision areas:

- 1 Fatal accidents and other serious accidents caused by working environment factors.
- 2 Work-related exposure to carcinogenic chemical substances and work-related brain damage caused by exposure to organic solvents or heavy metals.
- 3 Injuries sustained by children and adolescents as a result of working environment factors.
- 4 Injuries caused by heavy lifting and work-related illnesses as a result of monotonous repetitive work.
- 5 Health injuries caused by psychosocial risk factors in the workplace.
- 6 Diseases or serious problems caused by poor indoor climate in the workplace.
- 7 Hearing damage caused by noise in the workplace.

Step V: Measure outputs

The direct products/services delivered, or activities undertaken, by a labour inspectorate is referred to as "output". For example, the number of targeted inspections conducted annually by a LI. Usually, a labour inspectorate develops these specific activities as part of the overall OSH strategies which have been created to address the goals and targets set out in Step II.



Output (the activities expended by the LI) and resources used to undertake these activities provide the LI with a calculation of efficiency of the LI.

Danish Working Environment Authority (WEA)

The WEA conducts 59,000 inspections annually at approximately 40,000 workplaces.

Step VI: Measure outcomes

Measuring outcomes is a measure of program effectiveness. The question of “is the LI effective in meeting the goals, objectives and targets as set out in Stage II?” is answered by measuring outcomes.

These outcomes are often measured in “rate” for example the “rate of reduction of injuries or absence from work, per worker population” against the targets set out in Step II (above).

Danish Working Environment Authority (WEA)

Number of workplace related injuries distributed by year 2001–2009 and by type of accident show a reduction of 18% from 2001–2009. [Data from emergency departments in Glostrup, Frederikssund, Esbjerg, and Randers⁴⁰.] In March 2011, the WEA developed a *Strategy for the working environment towards 2020*.⁴¹ Data is being developed to measure the outcomes of this new strategy.

	Year								
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Occupational accident	12080	11487	10535	11424	11242	10811	10539	10793	8954
Occupational and traffic accident	145	221	234	244	243	317	274	282	261

Key information for WEA

The Danish Working Environment Authority is managed by an administrative board comprised of a director general, and five centre managers.

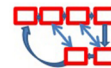
The headquarters of the Danish Working Environment Authority are located in Copenhagen. Three of the five centres are located in Copenhagen: Working Environment Advisory Center and HR Centre and Inspection Centre East.

The inspection of enterprises is integrated into three regional inspection centres – Inspection Centre East (Zealand), Inspection Centre South (Funen and South Jutland) and Inspection Centre North (North Jutland) – each with approximately 130–160 employees.

The Danish Working Environment Authority has approximately 750 employees.

40 <http://www.si-folkesundhed.dk/Ulykkestabeller/uk/gentyphva.shtml>

41 <http://arbejdstilsynet.dk/~media/at/at/12-engelsk/rapporter/2020%20engelskpdf.ashx>



Lithuania: State Labour Inspectorate of the Republic of Lithuania

Setting the context

The Ministry of Labour and Social Affairs in collaboration with the Ministry of Health Care carries out the activities aimed at solving occupational health and safety problems in Lithuania. Occupational health care system in Lithuania consists of three levels:

- 1 primary occupational health centres in the industry;
- 2 general practitioners taking care of employees' health; and
- 3 the State Labour Inspectorate.

There is no specialised OSH institute in Lithuania. The Institute of Hygiene includes a Department of Occupational Medicine.

The regional occupational medicine centres are located in the three major cities of Lithuania: Vilnius, Kaunas and Klaipeda. Hygiene investigations of workplaces and prophylaxis of occupational diseases are performed by regional Public Health Centre Departments of Occupational Medicine.

The Occupational Safety and Health (OSH) Commission of Lithuania is organised on the principle of tripartite cooperation, and therefore includes representatives of employees organisations (Lithuanian Confederation of Trade Unions, the Lithuanian Trade Union "Solidarumas" and the Lithuanian Labour Federation), employers organisations (Lithuanian Industrialists Confederation, Lithuanian Business Employers Confederation, and Lithuanian Construction Association) and representatives of the Ministry of Social Security and Labour, the Ministry of Health, and the State Labour Inspectorate.

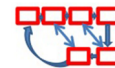
The key function of the OSH Commission is to consider the main issues of OSH, develop policy, debate and draft the OSH legislation. The Commission considers and analyses reports on the state of labour safety and compliance with labour laws as prepared by the State Labour Inspectorate, and subsequently submits proposals to the Ministry of Social Security and Labour, to the Ministry of Health, and to other state institutions and establishments, employer's organisations, trade unions and enterprises. These proposals may include development and implementation of programs to improve the OSH situation.

There are 195,700 businesses in Lithuania and 1,177,000 workers to whom the OSH legislation applies (legislation does not apply to self-employed workers).⁴²

Applying the Performance measurement framework

The conceptual framework discussed in this handbook provides a visual representation of the links between the six various stages of the framework which is a reminder that inputs, activities and outputs only make sense in relation to the outcomes that they are supposed to be influencing.

42 <http://www.vdi.lt/index.php?471412441>



The conceptual framework provides a labour inspectorate with a systematic approach to the question of effectiveness:

To what extent does OSH improve as a result of a labour inspectorate's (LI) activities?

There are six steps in this conceptual performance measurement framework. The following sections discuss each step in the context of the case study provided by the State Labour Inspectorate of the Republic of Lithuania.

Step I: Analyse the OSH situation

The performance measurement framework provides an approach which a labour inspectorate can use to think about the ultimate outcomes which need to be achieved.

Step I in the framework is consideration of analysis of the OSH situation or identification of the OSH problem(s):

What problem or issue does the labour inspectorate need to address?

What needs to change so that OSH can improve?

State Labour Inspectorate (SLI) of the Republic of Lithuania

The Republic of Lithuania undertook to examine the OSH situation in 2006, and subsequently identified the following issues:

Problem 1: In 2006 the number of fatal occupational accidents per 100,000 employees was 8.4. This fatality rate was three to four times higher than average figures in other EU countries.

Problem 2: In 2007, one eighth of the total number of enterprises was inspected. Of the total number of identified OSH violations, violations of labour organisation requirements accounted for 65%, and technical violations accounted for 35%.

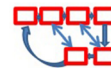
Inspection data showed that in 33% of the inspected enterprises, occupational risk assessment was carried out improperly, while in 26% of the inspected enterprises, risk assessment was not carried out at all. In most cases in enterprises with up to 50 employees (78% of the total number of enterprises), risk assessment was not carried out. These enterprises account for nearly one third of commerce and agricultural enterprises, and one fourth of manufacturing and construction enterprises.

Problem 3: Young persons were not properly prepared for working life, and it is believed that this contributed to the increasing number of occupational accidents and diseases for this age category.

Problem 4: Workers and the public were not aware of the OSH rules because common and publicly available information system on OSH had not been developed.

Step II: Establish goal(s)

In order to establish a performance measurement process for a labour inspectorate (LI), it is important that the government level OSH goals/objectives are clearly established and are connected to the mission of the LI.



The OSH goals for governments are usually articulated in their vision, mission and goals.

A labour inspectorate will need to align its strategies with those of its government. Through implementation of its strategies, the labour inspectorate contributes to achievement of the OSH goals of the government.

State Labour Inspectorate (SLI) Republic of Lithuania

In Lithuania, there are three levels of OSH visions and goals:

Government of the Republic of Lithuania:

- ▶ OSH goal:
 - Strive to achieve reduction of serious and fatal accidents at work.
 - To advance legal and organisational OSH system, ensuring quality of work and preservation of capacity to work.

Ministry of Social Security and Labour and Ministry of Health together carry out the public administration of OSH in Lithuania.

- ▶ Vision:
 - to ensure safe working environment and develop social dialogue, modernise regulation of labour relations.
- ▶ Goal:
 - to implement state policy on OSH issues.

State Labour Inspectorate (SLI) Republic of Lithuania:

- ▶ Goal:
 - strive to protect life and health of employees as well as their capacity to work through enforcement of legal acts and prevention of violations within the competence of SLI.

Establish baselines and timelines for goals identified in Step II

Performance can only be measured if there is something to which it can be compared. For this purpose, it is necessary for a LI to establish a baseline against which it can measure its progress.

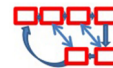
In addition, for comparison purposes, a LI may choose to establish an external benchmark against which it can compare itself and its progress, for example, by looking at the achievements of other, similar SLI programs that are considered leaders in the field.

State Labour Inspectorate (SLI) of the Republic of Lithuania

The SLI of the Republic of Lithuania used as its baseline the year 2006 and the number of fatalities and serious accidents which occurred in that year.

The SLI then established the following strategic objectives to address the government's goal of reducing workplace fatalities and injuries:

- ▶ to reduce fatal accidents in workplaces by 25% by 2012 (from 8.4 fatalities per 100,000 employees in 2006 to 6.3 by 2012);
- ▶ to reduce serious workplace accidents by 25% by 2012 (from 17.8 in 2006 to 13.4 accidents per 100,000 employees by 2012).



Step III: Allocate resources [inputs]

“Resources” are usually expressed in the number of staff and the budget allocated to a labour inspectorate. This is referred to as “input” to the activities undertaken to address the OSH situation.

State Labour Inspectorate (SLI) of the Republic of Lithuania

In 2010, the SLI employed approximately 211 staff which included 197 OSH inspectors, operational program and policy development and administration.⁴³

The OHS strategy for Republic of Lithuania is applicable for the whole OHS system. One of the key strategies is to motivate others in the OHS system to contribute. However, the resources allocated by others are not known.

Partners working on achievement of OSH goals include:

- ▶ Employees organisations:
 - Lithuanian confederation of trade unions
 - Lithuanian trade union “Solidarumas“
 - Lithuanian labour federation
- ▶ Employers organisations:
 - Lithuanian industrialist’s confederation
 - Lithuanian business employers’ confederation
 - Lithuanian construction association

Step IV: Undertake activities

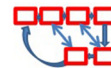
A labour inspectorate needs to develop strategies which are aligned with those of its government’s OSH goals. The labour inspectorate then implements its strategies through specific activities or operational strategies, thus, the labour inspectorate contributes to achievement of the OSH goals of the government.

State Labour Inspectorate (SLI) of the Republic of Lithuania

Government of the Republic of Lithuania established as its goal to strive to reduce serious and fatal accidents at work.

Control of enterprises is carried out in accordance with established priorities and identified risks related with activities of enterprises. Priorities are established by analysing summarised results of inspections, circumstances and causes of accidents at work, industrial accidents and occupational diseases.

The information system for continuous monitoring of working conditions at workplaces was introduced in 2008 with the aim of collection, compilation and summing up of this data at the State Labour Inspectorate. Systematic compilation of inspection data using more than 500 parameters, describing OSH situation and control activities of SLI, is ensured by use of this IT system.



Based on this system the SLI identified the key problems that contributed to serious and fatal accidents at work, then proposed the following activities as the way of addressing these problems:

- ▶ Problem: Young persons were not properly prepared for working life, and it was believed that this factor served as a cause of increased numbers of occupational accidents and diseases for this age category:
 - Activity: integrate occupational risk and prevention training across all levels of education and in all fields with a view to preparing the youth for working activities.
- ▶ Problem: For small and medium-sized enterprises (SME), occupational risk assessment was carried out improperly, or not at all.
 - Activity: provide continuous education and training of employers and workers on recognition of potential occupational risks, potential adverse impact and long-term effects, with a particular focus on SMEs.
- ▶ Problem: Common and publicly available information system on OSH had not been developed.
 - Activity: set up an effective information system for employers and workers on health and safety at work.
- ▶ Problem: The Republic of Lithuania had three to four times the number of fatal occupational accidents than other EU countries.
 - Activity:
 - ensure regular competence development of occupational medicine professionals;
 - implement training projects targeted at workers who perform dangerous work;
 - develop employers' skills to safely organise dangerous works and workers' skills to act safely when performing dangerous work.

In order to accomplish the activities listed above, the SLI also:

- focused and maximised its resources towards these activities within the framework of its competence;
- consulted with employers, employees and their representative organisations;
- implemented various ways by which advice, methodical and organisational assistance could be provided, giving prime attention to SMEs.

Step V: Measure outputs

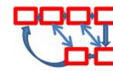
The direct products/services delivered, or activities undertaken, by a labour inspectorate is referred to as "output". For example, the number of targeted inspections conducted annually by a LI. Usually, a labour inspectorate develops these specific activities as part of the overall OSH strategies which have been created to address the goals and targets set out in Step II.

Output (the activities expended by the LI) and resources used to undertake these activities provide the LI with a calculation of efficiency of the LI.

State Labour Inspectorate (SLI) of the Republic of Lithuania

While working towards the goal outlined earlier, the SLI has completed the following two major initiatives:

- 1 A special consultation and education system has been created with the intention of providing thorough consultation with, and education of, employers, employees and



their representatives on OSH issues. A total of 131 seminars or consultations were attended by over 3,000 people, 47 seminars were organised by territorial offices for small and medium-sized undertakings, and nine itinerant consulting seminars of the SLI were carried out.

Consultation and information activities are carried out according to a specially designed plan and include the following more detailed examples:

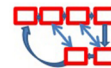
- To commemorate the World Day of Safety and Health at Work, “safety and health week at work” was announced in Lithuania. During this week the SLI organise free-of-charge seminars and consultations for employers and their representatives, or for managers of small and medium-sized enterprises in all counties and regions of the country.
- On the United Spring and Autumn Days of the SLI, consultations are simultaneously provided in 60 locations of the country on each day (80 per cent of regions) which are located far-off from the major towns.
- The SLI has developed an agreement with the Enterprise Europe Network Lithuania (which is formed by the Chamber of Commerce, Industry and Crafts in Lithuania) to organise common activities in order to promote and raise awareness on occupational health and safety (OSH) issues for the network members. In 2010, 15 seminars were organised in cooperation with the Enterprise Europe Network in Lithuania.
- Radio clips announcing the hotline number of the SLI were broadcast 100 times and extended notices on the threats of illegal employment and on the SLI hotline were placed in national and regional publications approximately 95 times during two information cycles organised for the purpose of prevention of illegal employment (in June and in July–August). Taking into account the pressing problem of shadow economy, two press releases on this topic were published and two radio broadcasts were organised.
- The practice of direct communication with managers of enterprises is through electronic letters sent by the head of the SLI. In these letters the most problematic issues of unsafe work are highlighted to the enterprise by the SLI, ways of solving them are proposed and relevant actions are promoted. The SLI takes into consideration the response by the enterprise, and any requests made by the managers of enterprises. The SLI then undertakes to organise specialised consultative seminars adapted to the size, the nature of activities, the risks and problems of the enterprises in the relevant regions. In 2010, nine such letters were sent by the Chief (and/or the Deputy Chief) of the SLI.

According to the latest data, every eighth employee of the country receives some form of consultation by the SLI to address their OSH issues. As well, proactively, employers ask labour inspectors to come to their enterprises as lecturers at specially arranged workshops for employees or for provision of consultations.

2 The SLI established activities to promote the principles and methods of OSH management systems, and to explain how to prioritise those workplace risks outlined in the legislation.

In order to complete these initiatives, in 2010, the SLI measured outputs as follows:

- conducted 12,000 inspections. In order to reduce the administrative burden on business entities, 15.6% of inspections were carried out together with other economic entity supervisory and control authorities (in the presence of their representatives or labour inspectors);
- investigated 100% of complaints;
- issued 8,098 improvement notices;
- issued 1,094 suspensions of operations;



- ▶ imposed/proposed 680 administrative fines imposed/proposed (including on-the-spot fines);
- ▶ referred 175 cases to prosecutors (12% of cases resulted in legal proceedings);
- ▶ investigated 100% of registered occupational diseases (313).

Step VI: Measure outcomes

Measuring outcomes is a measure of program effectiveness. The question of “is the LI effective in meeting the goals, objectives and targets as set out in Step II?” is answered by measuring outcomes.

These outcomes are often measured in “rate” for example the “rate of reduction of injuries or absence from work, per worker population” against the targets set out in Step II (above).

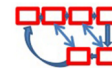
State Labour Inspectorate Republic of Lithuania

From the start of the implementation of the SLI educational project, the rate of fatal and serious accidents has decreased notably. In 2010, the rate of fatal accidents at work per 100,000 employees decreased by 1.8 times in comparison with the year 2007.

A further step in making SLI activities more effective is the implementation of the project *Introduction of quality management system and improvement of services to citizens*, started in 2011.

The system of performance management and monitoring, implemented within the framework of this project, will allow more effective and efficient management of SLI human resources and administration. The system will enhance effectiveness of SLI performance; decisions will be made based on measurable performance criteria, in this way ensuring legitimacy of decisions and impact upon effectiveness of performance of the organisation.

The developed and introduced system of OSH risk evaluation of economic entities will allow identifying precisely the level of OSH risks of economic entities through more effective control of OSH situation of enterprises and employees. Newly developed and implemented methodology of identification of risks of economic entities will provide conditions for directing the OSH inspection resources for high risk companies. The possibility to increase effectiveness of SLI performance will arise as well as to adopt necessary decisions based on measurable performance indicators.



The Netherlands: Ministry of Social Affairs and Employment

1a. Mission

The mission of the Ministry of Social Affairs and Employment is to foster a socially and economically vigorous position for the Netherlands in Europe, with work and income security for everyone. The Minister and State Secretary are responsible for labour market policy, including migration and the free movement of workers, benefits and re-integration, income policy, work-life balance, and policy on working conditions and inspection.

1b. Organisation: Ministry of Social Affairs and Employment

The Hague - New Inspectorate SZW from 1 January 2012

The new Inspectorate SZW came into being on 1 January 2012. The Inspectorate SZW combines the organisations and the activities of the Labour Inspectorate, the Work and Income Inspectorate and the Social and Intelligence Investigation Service of the Ministry of Social Affairs and Employment. With the Inspectorate SZW in its new form, there is an inspectorate that works (together) for a fair, healthy and safe working world with social security for everyone.

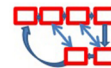
Total Staff	2010
▶ Labour Inspectorate/Working Conditions	432
▶ Labour Inspectorate/Major Hazard Control	88
▶ Labour Inspectorate/Illegal Employment and Wages	235
▶ Rest	29
Total	784
Number of Inspectors	
▶ Labour Inspectorate/Working Conditions	218
▶ Labour Inspectorate/Major Hazard Control	42
▶ Labour Inspectorate/Illegal Employment and Wages	171
Total	431

1c. Operational strategies of Inspectorate SZW (former Labour Inspectorate)

Although the Inspectorate SZW is a new organisation, the core tasks remain the same:

- ▶ Supervision of compliance with the regulations in the area of working conditions and the prevention of major hazards involving dangerous substances.
- ▶ Supervision of compliance with the regulations concerning illegal employment and minimum wages.
- ▶ Carrying out investigations into the lawfulness and efficiency of the implementation of the social security laws by the Employee Insurance Agency (UWV), the Social Insurance Bank (SVB), municipal government and other organisations (as well as the effectiveness).
- ▶ Detecting fraud, exploitation and organised crime within the chain of work and income (exploitation in employment, human trafficking and large-scale fraud in the area of social security). This work is carried out under the direction of the Public Prosecution Service.
- ▶ Identifying developments and risks in the working area of Social Affairs and Employment and reporting these to interested parties.

By combining the three organisations into one, supervision over the compliance with rules and regulations across the whole range of Social Affairs and Employment can be organised more cleverly, more effectively and with greater efficiency. This is achieved



on the basis of risk analysis across the breadth of Social Affairs and Employment and by using a carefully chosen mixture of:

- ▶ preventive actions (providing information about rights and obligations);
- ▶ inspections;
- ▶ investigations;
- ▶ repressive interventions (such as fines and the enforcement of criminal law).

Priorities of the Inspectorate SZW

The Inspectorate SZW is selective in its supervision: it sets priorities on the basis of risk analysis over the whole range of the working area within the Ministry of Social Affairs and Employment. This means that the Inspectorate is able to use its capacity efficiently where necessary in order to gain results. On the basis of the results of the risk analysis for the year 2012, the Inspectorate has designated a high priority to the following task areas for the coming years:

- ▶ illegal employment;
- ▶ exploitation in employment;
- ▶ companies that score badly in general concerning safety in the workplace;
- ▶ companies that work with dangerous substances;
- ▶ benefit fraud.

Working conditions

The Inspectorate SZW is working on a policy of supervision whereby it provides perspective about work, it helps to prevent accidents at work and occupational diseases, it keeps sickness absence as low as possible and it minimises the flow of workers into claiming unemployment benefits. With a view to the ageing (working) population, sustainable employability is of crucial importance to the future labour market. The Inspectorate SZW distinguishes the following areas requiring special attention:

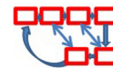
- 1 The health and safety of employees;
- 2 High-risk businesses;
- 3 Working hours and rest breaks for employees.

Health and safety

A healthy and safe working climate leads to healthy and motivated employees. Employees who work in healthy and safe conditions are less likely to suffer from stress, become ill or unfit for work, they are better motivated and they perform better all round. Employers make savings hereby in unnecessarily high sickness and worker replacement costs as well as insurance premiums. Moreover, a positive and safe working climate is good for the image of the business or organisation.

Set out in the Working Conditions Act (*Arbeidsomstandighedenwet*), the Working Conditions Decree (*Arbobesluit*) and the Working Conditions Regulations (*Arboregeling*) are the rights and obligations for employers and employees in the area of health and safety at work.

Employers have the primary responsibility for providing a situation whereby their employees can work under healthy and safe conditions. Employees also have responsibilities. They are obliged, for example, to follow the relevant safety conditions



that apply within the workplace. In order to promote healthy and safe working conditions, it is important that employers ensure that their employees are kept well-informed about the rights and obligations that apply to the employees. Moreover, it is important that employers implement a structural, adequate and up-to-date working conditions policy. It is recommended to formulate the working conditions policy in collaboration with the works council or together with employee representation.

The Working Conditions legislation applies everywhere that 'work under authority' is carried out. It applies also partly to the self-employed workers.

1d. Organisational structure

Head of the Inspectorate SZW is the Inspector General (IG). Reporting to the IG are the Director for the execution of the OSH programme, the Director for Major Hazard, the Director for Illegal Employment, the Director for Analysis and Projects, and the Director for Internal Affairs. The Director for Analysis and Projects is responsible for the measurements of the performance of the Inspectorate.

The Policy Department is responsible for the measurement of the level of compliance in society.

Weblink: <http://www.government.nl/ministries/szw>

1e. Partners

The Ministry works together with the social partners and with research institutes, especially with TNO.

1f. Role in performance measurement

The outcome from the Inspectorate is measured in several ways. Three questionnaires are used: One for the employers (WEA), one for the employees (NEA) and one for the inspectors. The first two questionnaires are organised by TNO. The third one is done by labour inspectors. TNO makes comprehensive reports on the OSH situation in the Netherlands. The Central Bureau of Statistics is responsible for measuring the number of occupational accidents. The Dutch Centre for Occupational Diseases is responsible for the collection of data on occupational diseases. The project leaders from the Inspectorate measure the results in companies where inspections took place.

Example of OSH situation, the problems, risks and needs

Approach Inspectorate SZW (Former Labour Inspectorate) of aggression and violence

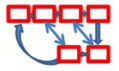
Background

Aggression and violence against workers with a public role in recent years in the Netherlands increased in severity and extent. Firemen, policemen and aid workers, including ambulance staff, are regularly faced with verbal abuse, threats, intimidation and physical violence. This is not acceptable. The government made the control of aggression and violence a focal point.

Employers are required under the Working Conditions Act to protect their workers against aggression and violence from the public. The inspectorate checks whether employers meet their obligations.

Program

The inspection has intensified its monitoring activities in the program "Aggression and violence against employees in public functions". The program started late 2009 and



had a duration of two years. The intensification took place with a mix of inspection and information actions.

The program aimed to encourage employers to take measures to reduce the risks of aggression and violence, to prevention and control. The program focused primarily on sectors with public duties as the Public Administration, Public Transport, Health and Welfare and Education. However, during the duration of the program, the activities were extended to other sectors with public contact as the hospitality sector, gas stations and Bailiffs.

Inspections

Inspections have taken place in sectors such as Public Transport, Social Security, Health and Welfare, Justice, Police, Fire Brigades, Catering, Asylum, Child Care and Probation.

Exploratory visits are made to sectors to understand the extent of exposure to aggression and violence and the measures to be taken, then to decide whether it is appropriate to include these sectors in the inspection program.

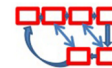
The inspections are conducted on the basis of eleven control measures needed for a good company policy on aggression and violence. These measures include: an inventory and assessment of the risks, the establishment of procedures for reporting, recording and evaluation of incidents of aggression, providing information, instruction and training, the drafting of a protocol, the disclosure of house rules, providing a sufficient head count, applying technical and constructive facilities in meeting and waiting rooms, setting an alarm system, a system of care, support and aftercare for employees, ensuring the prosecution of offenders and claiming of damage, and evaluation of control measures.

Information

The inspectorate has strengthened its approach by developing and distributing a flyer "Aggression and violence, where is the inspectorate focussing on?" In this flyer the eleven control measures are listed which the employer must take to meet the obligations of the Working Conditions Act. In 2010 and 2011, the inspectorate brought in media campaigns the eleven control measures under the spotlight to employers (radio spots, banners, ads). Employers are directed to sites with educational material including to the site of the inspectorate with branch specific information. Also, the inspectorate has participated in workshops and fairs to provide information about the measures to combat aggression and violence.

The eleven control measures are put by the inspectorate in a digital tool. The tool is published on the site www.zelfinspectie.nl. Employers can evaluate their own organisation through an eleven-step plan and thus determine whether their policy meets the requirements of the Working Conditions Act. After completing this self inspection, the employer has a plan for improvement, with the (additional) measures to improve his approach. Through the media and mailings this instrument is announced in the public sector. From February 2011 to March 2012, the site got 21,362 visits.

For the development of a government policy it is important to have insight in the nature and extent of incidents. The threshold for workers' representatives and employees to report incidents of aggression reveals to be quite high. The inspectorate intends to develop an app for the smartphone to provide an impetus for reporting incidents easier. This will be done in collaboration with social partners. The app enables employees to report promptly aggression incidents at any time and from any location in four simple steps. The app is connected directly to the system for the registration of aggression incidents (ARO/GIR) that both the government and municipalities use. This will also facilitate an adequate response and applying of measures.



The inspectorate has reached by its inspections and communication campaigns a great deal of the public domain. She notes that some of the organisations, sometimes after repeated inspections, have made significant progress in taking action. Also other organisations are stimulated by the inspectorate to apply measures against aggression and violence.

The increase of attention for aggression and violence appears partly from the fact that sectors such as the State, the Provinces, the Water Boards, Municipalities and Health Care and Welfare have now catalogues, approved by Government, where organisations of employers and employees have described how to comply with the legislation on aggression and violence.

The main concern now is the implementation of measures in the workplace, reporting, registering and evaluating of incidents and training of employees to avoid and being prepared for aggression and violence.

Research shows that in the public sector the number of employees who are victims of aggression and violence has decreased from 65% in 2009 to 59% in 2011. The inspectorate will continue its activities in cooperation with other parties in the coming years.

Targets against which the performance will be or is being measured

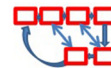
The performance of an inspectorate is hard to measure because of the multi-causal relationships. An example of a performance indicator is given below.

Compliance indicators, source "Arbo in bedrijf 2006–2009" as % of number of employees.

	All sectors		
	2006	2007	2008
Risk assessment present on the 1st of July	87,5	84	83,9
From these % evaluated	91	92,4	89,3
Written plan of action present	82,5	79,9	82
Contract with occupational S and H service	93,5	94	91,8
Policy for sickness leave?	96,1	96,2	94,2
Emergency employee present?	92,8	90,2	91,4
Employee for prevention present?	78,1	77,7	80,6

Current measurement initiatives or frameworks

Besides the measurements mentioned in 1f, a new method is used by the inspectors giving a simple judgement of the OSH management and factual OSH situation in a company. This indicator takes into consideration the managerial elements like the risk assessment and training and education of workers, and the practical measures on the workplace. The results are stored in a database. We hope to be able to analyse developments in sectors, when we repeat an inspection programme.



Norway: Measuring the effect of labour inspection in the Food and Beverage Industry – a Norwegian approach

OSH objectives and strategy in Norway

The OSH objectives of the Norwegian Government is defined in the Working Environment Law as:

- a fully satisfactory OSH situation for everybody;
- safe and secure contract conditions;
- meaningful work for the individual.

A main strategy is implementation of OSH Management Systems (OSH-MS) in all enterprises. This is required by law for all enterprises independent of branch or size. The philosophy behind this is that the implementation of OSH-MS will necessarily lead to:

- changes of knowledge;
- changes of attitudes;
- risk assessment;

which means a better working environment with:

- less accidents;
- better health;
- less absenteeism.

This means that **OSH-MS can be regarded as an indicator** by which the development of the OSH situation can be measured.

The Labour Inspection Authority (LIA)

While the Ministry of Labour (MOL) is responsible for the legislative framework and for the general policy and strategy for OSH, the main tasks for the LIA are to:

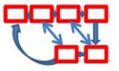
- develop regulations;
- develop strategies and annual plans to be adopted by the Ministry;
- run inspections and inspection programmes;
- initiate research;
- provide OSH data and monitor the OSH situation.

The LIA contributes to improvement of OSH in enterprises through:

- development of an effective and functional legal framework;
- supervise and control that enterprises comply with the current legislation;
- information and guidance;
- cooperation with other bodies and organisations.

The main strategy of LIA has been that:

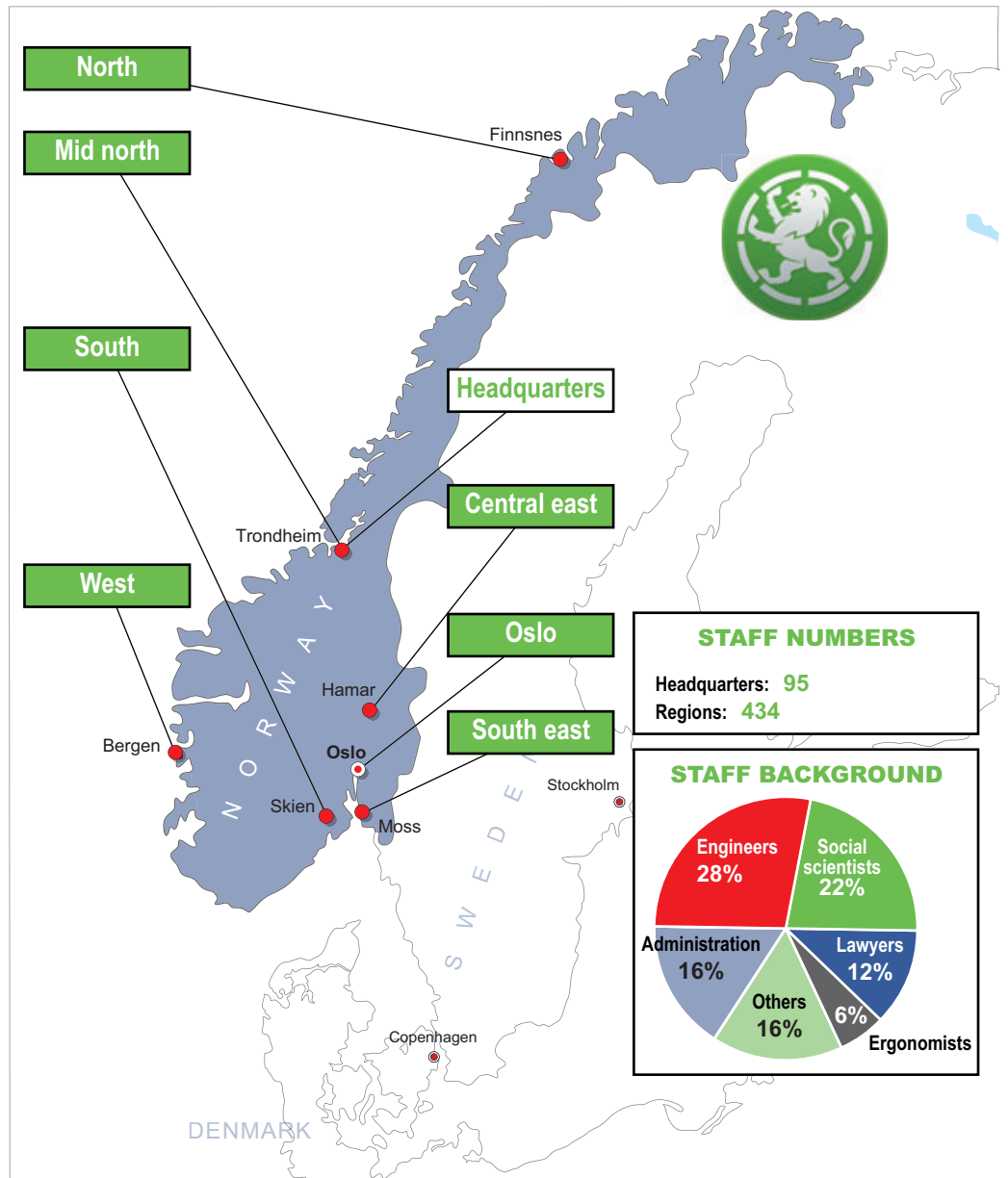
- Number of enterprises implementing OSH-MS shall be increased with main focus on assessment of the OSH situation and risk assessment.



The general approaches are to:

- ▮ Increase in number of inspections, particularly in high risk branches.
- ▮ Convey information and guidance to target groups.
- ▮ Develop inspection methods and practices.
- ▮ Aim at an increase of knowledge in enterprises and own organisation.

Structure and staff of the LIA

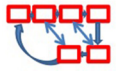


Campaign in the Food and Beverage Industry, 2001–2006

The campaign concept

The LIA focuses on high risk sectors. The identification of such sectors is based on evaluation of statistics and knowledge. The OSH situation is assessed using adequate parameters or/and indicators before a campaign is started and after it is finished.

A campaign is aiming at developing OSH knowledge and attitudes within a sector and to create a sound OSH culture.



By combining campaign programs and research one has been able to assess the LIA's contribution to an improved OSH situation.

The Food and Beverage (F&B) sector

The F&B sector is a relatively large industry in Norway:

- ▶ 1,650 enterprises, 55,000 employees (in 2000).

It is a high-risk industry and is characterised by:

- ▶ high accident rate;
- ▶ ergonomic challenges and noise;
- ▶ assembly line effects;
- ▶ time pressure and high work pace.

Implementation of the campaign

The campaign started in 2000 and was primarily focusing on:

- 1 Increase in the number of enterprises implementing OSH-MS.
- 2 Reduction in the number of accidents.

In 2000 the number of injuries was 24 per mill work hours compared to 10 for all industries.

OSH-MS was introduced as compulsory for all Norwegian enterprises in 1991 and when the campaign started ca. 75% (1,237) of all enterprises within the F&B sector claimed to have implemented the regulation.

It was the inspectors of the LIA who carried out the inspection and information programs while a research institute followed and surveyed the results at different stages in the process. The process is shown in Fig.2.

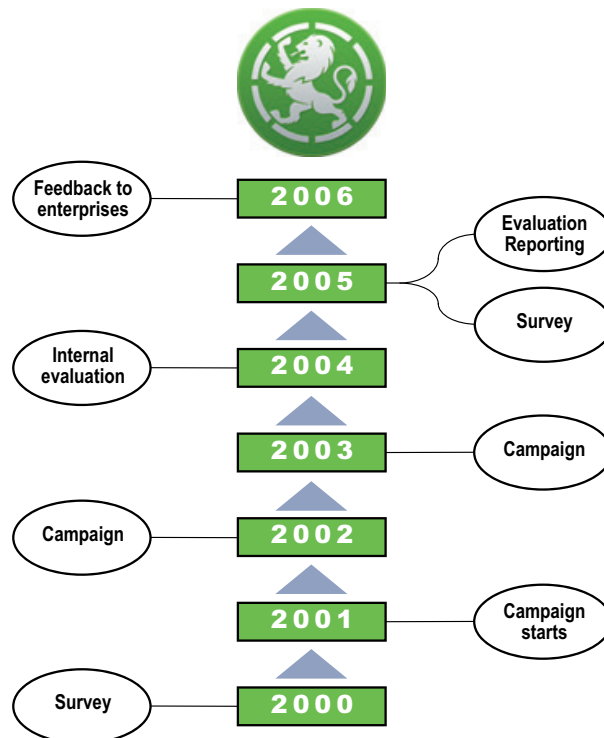
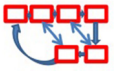


Figure 2



Inspection programs and surveys revealed that as a result of the campaign:

1 Number of enterprises implementing OSH-MS increased from 1,200 to nearly 1,500 (25% increase).

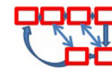
The injury rate went down from 24 to 16 per mill work hours and furthermore, it was verified that:

- ▶ Training of safety delegates increased by 17%.
- ▶ Considerable increase in number of enterprises who are:
 - assessing the OSH situation;
 - doing risk assessment;
 - implementing plans for improving the OSH situation.

The main conclusion suggested by both the research team and the LIA's personnel was that the campaign had contributed significantly to:

- ▶ Decrease of injuries over 5 years.
- ▶ Improvement of systematic OSH work.
- ▶ Better OSH knowledge in the F&B industry.
- ▶ Improved OSH understanding in the F&B industry.

54% of the employers who participated in the campaign claimed an increased OSH competence in their enterprise.



Singapore: Ministry of Manpower (MOM), OSH Division

Setting the context

In Singapore, the key legislation on worker safety and health (WSH) is provided for by the Workplace Safety and Health Act (WSHA) which is administered by the Commissioner for WSH, Ministry of Manpower. Replacing the former Factories Act, the WSHA came into effect on 1 March 2006 as the key legal instrument to effect the new WSH framework.

The WSHA is designed to protect employees as well as any other persons who may be affected by the work carried out at all workplaces.

In its first phase of implementation, coverage of the Act was limited to high-risk workplaces such as construction worksites, shipyards and other factories i.e. those formerly covered under the former Factories Act.

The Act has since been progressively expanded to cover all workplaces. The Act departs from taking a prescriptive stance under the former legislation and introduces a performance-based regime. In line with the general principle of reducing risks at source, the WSHA sets out a new liability regime that assigns legal responsibility to persons who create and have control over WSH risks.

The Government also regulates the right of employees to compensation in the event of work-related injury, death or occupational disease under the Work Injury Compensation Act (WICA).

The WICA took effect on 1 April 2008 following amendments to the former Workmen's Compensation Act (WCA). The amendments extended and doubled the coverage of the Act to provide more than two million employees with access to a simple and expeditious work injury compensation system. Compensation levels were also adjusted to better reflect the changes in wage levels and more adequately compensate injured employees for loss of earnings. In addition, the amended Act provides the Government with stronger capabilities to deter employers from non-payment of compensation. The result is a regulatory framework where employers internalise the cost of accidents in the form of statutory benefits for injured employees, thereby shaping their behaviour and attitude towards WSH.

The MOM Occupational Health and Safety Division has approximately 370 employees including approximately 200 inspectors. There are 3,105,900 workers (2010 figures).⁴⁴

Step I: Analyse the OSH situation

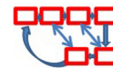
The performance measurement framework provides an approach which a labour inspectorate can use to think about the ultimate outcomes which need to be achieved.

Step I in the framework is consideration of analysis of the OSH situation or identification of the OSH problem(s):

What problem or issue does the labour inspectorate need to address?

What needs to change so that OSH can improve?

⁴⁴ <http://www.mom.gov.sg/workplace-safety-health/wsh-regulatory-framework/Pages/workplace-safety-health-act.aspx>



Singapore Ministry of Manpower (MOM)

In 2004/2005, some of the major issues faced by the Singapore Ministry of Manpower (MOM) include:

Problem 1:

While Singapore's safety standards have improved steadily over the past 20 years, injury rates stagnated from 2001 to 2004 at 2.2 industrial accidents⁴⁵ per million man hours worked.

MOM believed that if it continued with the current programs or even made paradigm shifts to the current regulatory regime, fatalities were not expected to fall significantly. The workplace fatality rate in 2004 of 4.9 fatalities per 100,000 employees was higher than the European Union's average rate of 2.5.

Problem 2:

Public reaction to the three major accidents in 2004 – Nicoll Highway collapse, Fusionpolis accident and the fire onboard the oil tanker Almudaina – demonstrated that the public expects higher standards of safety.

Problem 3:

Traditional enforcement activities focus on detection of on-site non-compliance are less effective at detecting systemic weaknesses.

Step II: Establish Goal(s)

In order to establish a performance measurement process for a labour inspectorate (LI), it is important that the government level OSH goals/objectives are clearly established and are connected to the mission of the LI.

The OSH goals for governments are usually articulated in their vision, mission and goals.

A labour inspectorate will need to align its strategies with those of its government. Through implementation of its strategies, the labour inspectorate contributes to achievement of the OSH goals of the government.

Singapore Ministry of Manpower (MOM)

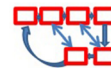
Goal: Ministry of Manpower, Singapore

A great workforce, a great workplace

Goal: Occupational Safety and Health Division

A safe and healthy workplace for everyone; and a country renowned for best practices in WSH

⁴⁵ These refer to accidents reportable under the Factories Act i.e. those resulting in 3 or more days of absence from work, occurring in general factories, construction worksites or shipyards.



Establish baselines and timelines for goals identified in Step II.

Performance can only be measured if there is something to which it can be compared. For this purpose, it is necessary for a LI to establish a baseline against which it can measure its progress.

In addition, for comparison purposes, a LI may choose to establish an external benchmark against which it can compare itself and its progress, for example, by looking at the achievements of other, similar SLI programs that are considered leaders in the field.

Singapore Ministry of Manpower (MOM)

At the onset of the establishment of the new framework, MOM's target is, by 2015, to reduce the fatality rate of 4.9 fatalities per 100,000 workers in 2004 by 50%, to attain standards of the current top ten developed countries with good safety records.

In 2008, this target was reviewed in tandem with the new mandate set by the Prime Minister of Singapore. The long term goal of MOM is to reduce workplace fatalities to less than 1.8 fatalities per 100,000 workers by 2018 and less than 280 injuries per 100,000 workers.

Step III: Allocate resources [inputs]

"Resources" are usually expressed in the number of staff and the budget allocated to a labour inspectorate. This is referred to as "input" to the activities undertaken to address the OSH situation.

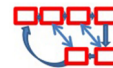
Singapore Ministry of Manpower (MOM)

With the increased suite of initiatives and programmes, the number of employees in the OSH Division increased gradually from about 200 in 2005 to around 370 in 2011. These include OSH inspectors (about 200), operational program and policy development and administration staff. The Division operates on an approximate budget of \$40 M annually (Singapore currency).

The resources allocated towards increasing health and safety are not limited to MOM alone. The MOM works through partnerships and alliances towards increased workplace health and safety. These partners include:

1 Tripartite Partners (Government, Trade Unions and Employer Union)

A unique, cooperative tripartite mechanism amongst workers, employers and the government is long practised in Singapore. This approach has been successful in cultivating constructive workplace relations in Singapore. It has helped companies and the economy to grow, as well as create jobs for the workforce. This mechanism has also proven useful in advancing WSH in Singapore. The tripartite partnership between MOM, together with Singapore National Employers Federation (SNEF) and National Trades Union Congress (NTUC), has been instrumental in bringing about close consultation and communication avenues between the government and representatives of employers and workforce on WSH issues. The formation of the WSH Council has also helped to foster even greater coordination and collaboration between the regulator and the industry stakeholders.



2 WSH Professionals and Specialists

WSH professionals and specialists provide assistance to employers in monitoring and improving WSH management at the workplace. They can drive capability and culture building efforts, by identifying WSH gaps and recommending cost-effective solutions in their organisations. They also aim to drive WSH improvements beyond compliance with legislative standards. WSH professionals include WSH auditors, officers, coordinators and representatives, while WSH specialists include diverse occupations ranging from industrial hygienists to noise control officers.

3 Institutions and Service Providers

Professional bodies play a key role in promoting and raising the stature and professionalism of the WSH profession. Educational institutes will imbue in students the value of safety and health as a way of life, and work closely with industry to integrate WSH concepts into the curriculum of relevant tertiary-level courses. Training providers will deliver quality training to build up the competencies of the workforce, while other service providers such as consultancies provide expert advice to raise WSH standards. In addition, we have established a dedicated WSH Institute that will partner other local and international agencies to provide advanced and/or specialised WSH education, knowledge and solutions, and spearhead efforts in applied research.

Step IV: Undertake activities

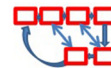
A labour inspectorate needs to develop strategies which are aligned with those of its government's OSH goals. The labour inspectorate then implements its strategies through specific activities or operational strategies, thus, the labour inspectorate contributes to achievement of the OSH goals of the government.

Singapore Ministry of Manpower (MOM)

To establish and maintain an effective regulatory framework to implement the WSH Act, targeted interventions and enforcement actions are developed based on a comprehensive analysis of industry trends and developments.

Key strategies include:

- (a) Strategic intervention:
 - (i) To prioritise efforts and focus on areas that matter most, resources have to be deployed strategically.
 - (ii) Programme-based Engagement (ProBE) originated from the Ministry of Manpower's Strategic Occupational Safety and Health (OSH) Engagement Framework. ProBE focuses on intervention efforts in priority areas to stem the root causes of safety and health deficiencies.
 - (iii) This allows OSHD to deploy its regulatory efforts where they are needed most, in order to bring about quantum improvements in safety performance and maximum benefits for workers and employers.
 - (iv) Business Under Surveillance (BUS) programme also ensures that priority areas are addressed. The BUS programme is a systemic intervention tool to regulate poor performing companies to focus on developing and implementing a robust safety and health management system to improve their WSH performance.
 - (v) Sectoral strategies have also been developed for sectors with high accident rates. Under these strategies, intervention measures such as engagement and enforcement actions are also tailored to meet the specific needs of each



- industry sector. These strategies should include sectoral targets, key milestones and outcomes, dedicated programmes and initiatives specific to that sector (e.g. sectoral strategies developed for marine, construction, transport and logistics, chemical etc).
- (vi) Closely monitor workplaces that have the potential for catastrophic accidents (e.g. process safety monitoring systems).
 - (vii) Develop diagnostic tools to identify strengths and areas of improvement at the industry level so that intervention measures can be tailored to meet the specific needs of each industry sector.
- (b) Resolution of systemic lapses:
- (i) MOM moved beyond rectifying physical risks or violations to place a bigger focus on identifying systemic lapses that can potentially cause more accidents in the future at both the industry and company level.
 - (ii) Through the continual and active sharing of such information, businesses exposed to similar risks will be aware of the dangers and can adopt precautionary measures.
 - (iii) Enhance the capabilities of MOM's inspectors and investigators to identify systemic weaknesses.
 - (iv) Develop industry capabilities to identify systemic.
 - (v) Lapses in their respective workplaces (e.g. Cluster Operations (COPS) is a workplace inspection programme where selected cluster of workplaces are pre-announced on the website before the inspections take place. This is to encourage affected companies to take the initiative to improve safety and health standards within their workplace prior to MOM's inspections. Links to online guidelines, technical advisories and compliance assistance tools will be provided to assist companies in their preparation for the workplace inspections).
 - (vi) Share with industry the learning points from the systemic lapses identified.
- (c) Extended Enforcement Reach:
- (i) To ensure that MOM's enforcement resources are utilised strategically, MOM continually explores other avenues to complement enforcement efforts.
 - (ii) This includes the active engagement of the public to spot and report unsafe acts and conditions.
 - (iii) Leverage on the private sector capabilities where appropriate to supplement enforcement efforts (e.g. employment of auxiliary OSH inspectors for lower-risk workplaces).

Step V: Measure outputs

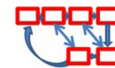
The direct products/services delivered, or activities undertaken, by a labour inspectorate is referred to as "output". For example, the number of targeted inspections conducted annually by a LI. Usually, a labour inspectorate develops these specific activities as part of the overall OSH strategies which have been created to address the goals and targets set out in Step II.

Output (the activities expended by the LI) and resources used to undertake these activities provide the LI with a calculation of efficiency of the LI.

Singapore Ministry of Manpower (MOM)

Outputs of implementation of the strategies outlined above include:

- 1 Number of offenders convicted under WSH Act:
 - 2009 – 47
 - 2010 – 53
 - 2011 (July) – 35



- 2 Number of inspections:
2008 – 6438
2009 – 5181
2010 – 6118
- 3 Number of composition fines issues:
2008 – 4090
2009 – 3161
2010 – 3648
- 4 Number of notices of non-compliances:
2008 – 8852
2009 – 7194
2010 – 7622
- 5 Number of workplace fatalities:
2008 – 67
2009 – 70
2010 – 55

Step VI: Measure outcomes

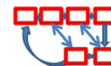
Measuring outcomes is a measure of program effectiveness. The question of “is the LI effective in meeting the goals, objectives and targets as set out in Step II?” is answered by measuring outcomes. These outcomes are often measured in “rate” for example the “rate of reduction of injuries or absence from work, per worker population” against the targets set out in Step II (above).

Singapore Ministry of Manpower (MOM)

Singapore has made significant improvements in its workplace fatality rate since the establishment of the new WSH framework.

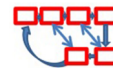
Since 2005, Singapore has been on track to halve the fatality rate (of 4.9 fatalities per 100,000 workers in 2004) and to achieve our new target of less than 1.8 fatalities per 100,000 workers by 2018.

Year	Workplace fatality rate (per 100,000 workers)
2010	2.2
2009	2.9
2008	2.8
2007	2.9
2006	3.1
2005	4.0
2004	4.9



<p>Overview of the organisational structure of the MOM Labour Inspectorate⁴⁶</p>	<p>The Occupational Safety and Health Division is structured around four departments and the Workplace Safety and Health Council Office.</p> <p>OSH Inspectorate: focuses on reducing safety and health risks at workplaces by conducting inspections and surveillance of workplaces to ensure that workplaces maintain an acceptable level of WSH standards. The Inspectorate also investigates accidents and shares lessons learnt from the accidents with the industry.</p> <p>OSH Policy, Information and Corporate Services Department: drives the divisional efforts through sound policies & strategic planning while striving for organisation excellence, and analyses and identifies emerging WSH trends and risks by leveraging on effective information systems, quality resources and astute business intelligence. The Department also supports the Division in the areas of financial management, registry and day-to-day office administration as well as ensures continuous improvement in customer responsiveness through monitoring of customer service standards.</p> <p>OSH Specialists Department: provides specialist support in the development of WSH standards and best practices, as well as the investigation into complex accidents and occupational diseases. The Department conducts technical and scientific research, develops and implements strategies and targeted programmes for specific WSH hazards and industries. The Department also collaborates with international organisations and national institutes in projects, information exchange, visits and training.</p> <p>Work Injury Compensation Department: administers the Work Injury Compensation system to assist injured employees and dependants of deceased employees in claiming work injury compensation. It also administers the Incident Reporting system for workplace accident, dangerous occurrence and occupational disease.</p> <p>Workplace Safety and Health Council Office: works through industry committees and industry players to understand the inner workings of the industry and drive efforts to identify sectoral gaps and propose solutions with industry feedback and OSHD's support. It collaborates with industry stakeholders to market WSH messages, programmes, awards, drives efforts to raise industry participation, and adoption of acceptable practices, and build industry capability to manage WSH.</p>
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46 <http://www.mom.gov.sg/Documents/safety-health/reports-stats/OSHD-AR2010/Introduction.pdf>



Slovenia: Labour Inspectorate of the Republic of Slovenia (LIS)

Setting the context

In Slovenia, safety and health at work falls under the jurisdiction of the Ministry of Labour, Family and Social Affairs, and the Ministry of Health. These two ministries monitor and assess the OSH situation and on this basis draw up regulations and solutions. The two main pieces of legislation are the Employment Act (2002) and the Health and Safety at Work Act (2011). The newly passed Health and Safety at Work Act⁴⁷ entered into force on December 2011. The new Act established, among others, the fundamental principles of risk avoidance, risk assessment, and dangerous substances replacement. It also stipulates the responsibilities of the labour inspectorate and details workplace violations and penalties.

The basic principles of the new Act include responsibilities of the **employer to take measures necessary for the safety and health of employees**, including **the prevention of occupational risks, provision of information and training**, as well as the **provision of appropriate organisation and necessary material resources**.

Enforcement of the legislation and regulations for labour relations, occupation and safety at work and social affairs is the responsibility of the Slovenian Labour Inspectorate. The responsibilities include enforcing all parts of OSH (e.g. workplace harassment and violence) and the state of labour relations in the workplace (e.g. using as indicators the number of violations to employment laws, cases of discrimination and the number of illegal workers).

The scope of the work of the labour inspectorate is specified in detail in the Labour Inspectorate Act, supplemented by the Inspection Act (2002). The two Acts regulate the general principles of inspection, the organisation of inspection, the position, rights and duties of inspectors, the authority of inspectors, the procedure of inspection, inspection measures and other questions connected with inspection.

In Slovenia, there are 171,000 enterprises with 850,000 employees and 70,000 self-employed.

Applying the Performance measurement framework

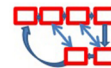
The conceptual performance measurement framework discussed in this handbook provides a visual representation of the links between the various stages of the framework which is a reminder that inputs, activities and outputs only make sense in relation to the outcomes that they are supposed to be influencing.

The conceptual framework provides a labour inspectorate with a systematic approach to the question of effectiveness:

To what extent does OSH improve as a result of a labour inspectorate's (LI) activities?

There are six steps in the performance measurement framework. The following sections discuss each step in the context of the information provided for the case study provided by the Republic of Slovenia Labour Inspectorate.

47 <http://www.uradni-list.si/1/content?id=103969>



Step I: Analyse the OSH situation

The performance measurement framework provides an approach which a labour inspectorate can use to think about the ultimate outcomes which need to be achieved.

Step I in the framework is consideration of analysis of the OSH situation or identification of the OSH problem(s):

What problem or issue does the labour inspectorate need to address?

What needs to change so that OSH can improve?

Labour Inspectorate of the Republic of Slovenia (LIS)

The LIS undertook to develop a strategy for 2009–2012⁴⁸ to reduce workplace related injuries following identification of the highest priority OSH issues. The main source of information for the development of this strategy comes from the *Labour Inspectorate Reporting of Injury* information system, for example:

- In 2007 and 2008 an average of 17,500 employed persons were involved in accidents at work leading to absenteeism of more than 3 days.
- Workplace fatalities have remained at the same level: In 2007, there were 29 fatal accidents, in 2008, there were 27 and 26 in the year 2009.
- Men were almost four times as likely to be involved in accidents at work as women.
- Older workers and workers in small and medium enterprises were more likely to be injured.
- The incidence of accidents was higher in the construction industry.
- The most common injuries for both men and women were bone, joint and muscular problems.

Although it is has been very difficult for the LIS to assess which factors are contributing towards changes in the incidence of workplace injuries over time, analysis is showing that the rates of major injury follow a pro-cyclical pattern.

Although, over the past number of years, Slovenia has been working on changing the OSH culture in enterprises and in spite of the some progress achieved in this area, many workers in Slovenia continue to perceive that their jobs pose a threat to their health and safety.

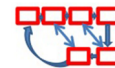
Step II: Establish Goal(s)

In order to establish a performance measurement process for a labour inspectorate (LI), it is important that the government level OSH goals/objectives are clearly established and are connected to the mission of the LI.

The OSH goals for governments are usually articulated in their vision, mission and goals.

A labour inspectorate will need to align its strategies with those of its government. Through implementation of its strategies, the labour inspectorate contributes to achievement of the OSH goals of the government.

48 Labour Inspectorate of the Republic of Slovenia OSH Strategy 2009 – 2012



Establish baselines and timelines for goals identified in Step II

Performance can only be measured if there is something to which it can be compared. For this purpose, it is necessary for a LI to establish a baseline against which it can measure its progress.

In addition, for comparison purposes, a LI may choose to establish an external benchmark against which it can compare itself and its progress, for example, by looking at the achievements of other, similar SLI programs that are considered leaders in the field.

Labour Inspectorate of the Republic of Slovenia (LIS)

Over the period 2000–2007, the rate of fatal accidents at work in Slovenia has not fallen. Therefore, a strategy was developed which proposed a 25% reduction in the total incidence rate of accidents at work by 2012, based on 2007 data, by improving health and safety protection for workers. In 2008, the Labour Inspectorate of the Republic of Slovenia started to implement this strategy with the goal of decreasing the number of accidents at work.⁴⁹

Step III: Allocate resources [inputs]

“Resources” are usually expressed in the number of staff and the budget allocated to a labour inspectorate. This is referred to as “input” to the activities undertaken to address the OSH situation.

Labour Inspectorate of the Republic of Slovenia (LIS)

The Republic of Slovenia has 84 active labour inspectors (as of the 31 December 2010);⁵⁰ however, in order to meet the vision of reduced workplace injuries and incidents, the LIS works in cooperation with employer and worker organisations through a national network involving government representatives, representatives of unions and employers’ organisations, experts and researchers in the area of safety and health at work and occupational medicine. Operating under the Ministry of Labour, Family and Social Affairs, which performs the duties of the EU-OSHA national focal point, the national network is involved especially in promoting a safety culture and spreading information about issues of ensuring safety and health at work.

In order to make best use of its resources, the LIS targets its activities based on several sources of information, such as empirical studies, consultation with social partners, experience of the inspectors, data base reviews etc.

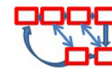
The LIS budget was approximately € 4.5 Million.⁵¹

49 The whole project is available on LIRS web site (available on Slovenian language)

http://www.id.gov.si/si/javne_objave/projekt_zmansevanja_smrtnih_in_tezjih_nezgod/

50 <http://www.congresomundialtrabajo2012.com/wp-content/uploads/2011/01/Dr.-Luka-Ticar.pdf>

51 http://www.id.gov.si/fileadmin/id.gov.si/pageuploads/Intranet/SLIC_nadzor_2010/LIRS_2009_Annual_ReportII.pdf



Step IV: Undertake activities

A labour inspectorate needs to develop strategies which are aligned with those of its government's OSH goals. The labour inspectorate then implements its strategies through specific activities or operational strategies, thus, the labour inspectorate contributes to achievement of the OSH goals of the government.

Labour Inspectorate of the Republic of Slovenia (LIS)

To achieve the goal of 25% reduction in workplace injuries as outlined in the Labour Inspectorate of the Republic of Slovenia OSH Strategy 2009–2012, the LIS carries out approximately 17,000 risk and evidence based inspections per year. These inspections include preventive workplace visits, system revisions and audits, promotion of OSH-MS and risk assessment in enterprises. Specifically, the LIS undertakes the following key activities:

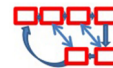
- 1 Implementation of EU legislation.
- 2 Implementation of the legislation.
- 3 Promotion of the development and implementation of national strategies.
- 4 Encouraging changes in the behaviour of workers and encourage their employers to adopt health-focused approaches.
- 5 Promoting health and safety at national level, i.e. active participation in Workplace Health Promotion.

The LIS provides employers and workers with expert assistance in connection with implementing laws and other regulations, collective agreements and general acts within its jurisdiction. It works in cooperation with other inspectorates, employment institutes, health insurance and pension and disability insurance, as well as with trade unions or professional associations of workers and employer associations. It also cooperates with research and educational organisations and with experts in the labour field.

While performing inspections in cases in which an inspector finds that the law or other regulations or acts have been violated, he has the right and duty to order measures for remedying the irregularity or deficiency within a time limit that he determines himself. Additional measures inspectors can use are fines, prohibition of performing working procedures, sealing the working areas, giving orders to stop the distribution of electricity, water etc. The inspector has the power to lay a charge for a criminal offence, which is prosecuted ex-officio, or to propose to a competent body the adoption of measures, to order other measures and to perform acts for which he is authorised by law or other regulations.

During workplace inspections, the LIS assesses:

- 1 OSH in the workplace using the following quantitative parameters:
 - (i) number of accidents;
 - (ii) rate of absenteeism;
 - (iii) the level of noise;
 - (iv) exposure of workers to chemicals and/or biological hazards.



2 Qualitative parameters including:

- (i) level of OSH knowledge in enterprises;
- (ii) implementation of OSH management systems in enterprises.

The LIS recognises the need to evaluate effectiveness of actions taken.

Step V: Measure outputs

The direct products/services delivered, or activities undertaken, by a labour inspectorate is referred to as “output”. For example, the number of targeted inspections conducted annually by a LI. Usually, a labour inspectorate develops these specific activities as part of the overall OSH strategies which have been created to address the goals and targets set out in Step II.

Output (the activities expended by the LI) and resources used to undertake these activities provide the LI with a calculation of efficiency of the LI.

Labour Inspectorate of the Republic of Slovenia (LIS)

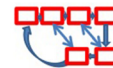
The labour inspectorate submits to its parent ministry a report of its work for the past calendar year, for example, in the most recent report, the LIS reported inspections of 171,126 commercial entities.

These comprehensive reports include data on the number of employers by activity in which inspection was carried out, the number of workers, data on the number of violations and crimes found, measures ordered by activity and data on fatal injuries at work, collective accidents at work, serious injuries and on findings of professional illness by activities, and proposed measures for solving questions in this area.⁵² The report is dealt with by the Government RS and submitted to the National Assembly RS. After having been debated, the report is communicated to the International Labour Office.

In addition, the LIS reports on specific targeted campaigns that it conducts based on risk assessment, for example, in 2009, the LIS conducted the following:

- 1 **Construction site campaign.** OHS inspectors performed 239 construction site supervisions. In the reporting period inspectors identified a total of 703 violations. A total of 401 measures were imposed.
- 2 **Tyre repair shops.** OHS inspectors performed 174 tyre repair shops supervisions. In the reporting period inspectors identified a total of 507 violations. A total of 121 measures were imposed.
- 3 **Senior citizen homes.** OHS inspectors performed 60 senior citizen homes supervisions. In the reporting period inspectors identified a total of 128 violations. A total of 29 measures were imposed.
- 4 **IT services.** OHS inspectors performed 177 IT services supervisions. In the reporting period inspectors identified a total of 574 violations. A total of 138 measures were imposed.

52 http://www.id.gov.si/fileadmin/id.gov.si/pageuploads/Intranet/SLIC_nadzor_2010/LIRS_2009_Annual_ReportII.pdf



5 **Organisations with a permit for work.** OHS inspectors performed 36 organisations with a permit for work supervisions. A total of 23 measures were imposed.

6 **Petrol stations.** OHS inspectors performed 247 petrol stations supervisions. In the reporting period inspectors identified a total of 129 violations. A total of 109 measures were imposed.

7 **Temporary and mobile construction sites.** OHS inspectors performed 431 mobile construction sites supervisions. In the reporting period inspectors identified a total of 1,026 violations. A total of 622 measures were imposed.

8 **Asbestos removal.** OHS inspectors performed 19 asbestos removal supervisions. A total of 16 measures were imposed.

Step VI: Measure outcomes

Measuring outcomes is a measure of program effectiveness. The question of “is the LI effective in meeting the goals, objectives and targets as set out in Stage II?” is answered by measuring outcomes.

These outcomes are often measured in “rate” for example the “rate of reduction of injuries or absence from work, per worker population” against the targets set out in Step II (above).

Labour Inspectorate of the Republic of Slovenia (LIS)

Assessment of LIS' performance includes setting measurable targets, for example:

- ▀ accidents at work in general;
- ▀ accidents and/or illnesses in high risk sectors.

Assessment is carried out both at enterprise level and at national level. Awareness campaigns are also assessed.

The assessment of OSH is primarily based on data collected at the labour inspectorates by inspection reports. The information mainly concerns the accidents at work (number, reasons, seriousness), deficiency and irregularities determined through surveillance procedures, and measures issued.

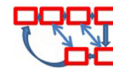
On the average only 8,000 out of 170,000 enterprises can be supervised or inspected every year and that does not allow for any important conclusions on the health and safety status of working life in Slovenia.

Since 2004 the inspectorate has monitored safety and health at work by a method using **representative samples**.

The methodology is based on random sampling where 1,500 employers (approximately 1% of all registered employers) were selected. The sample is representative due to the branch of activity and the number of employees.

In the evaluation system are different indicators used and followed up annually:

- ▀ risk assessment;
- ▀ preventative health examinations of employees;



- training and practical examinations in safe work practice;
- periodic examination of any chemical, physical or biological agents;
- use of personal protective equipment;
- employers obligation to inform workers;
- work equipment testing;
- reports to the labour inspectorate.

The mean is a questionnaire that is fulfilled by labour inspectors by using Lickart scale from 1 to 4. Using as an example the indicator “risk assessment”:

- 1 means that Risk Assessment is not applied.
- 2 Risk Assessment is applied however insufficient/inappropriate.
- 3 Risk Assessment is applied however workers are not informed.
- 4 Good Risk Assessment and workers are informed.

The rationale behind commencing this project is not primarily to measure the effect of the LI’s activity but rather to measure if some issues within health and safety at work get improved or get worse.

The methodology used gives reliable statistics on the overall situation but **does not identify the reasons** for changes (improvements), and thus do not measure the performance of the LI.

But the LI is aiming at further development of the system and the method can be regarded as a first step on the road to assess the performance of labour inspection.⁵³

The LIS is currently in the middle of implementation of a long term strategy (2009–2012) for which the *“The ultimate goal is zero preventable incidents that can affect health and safety.”*

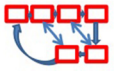
The long term strategy is drawn up on the basis of the mission and vision that have been formulated, the experiences in the field and the contributions and wishes of the political and official leadership. In order to deliver, the labour inspectorate has a significant challenge: more than 140,000 employers (or business locations), and the number of workers is expected to approach 800,000 during the period covered by this plan. It is expected that the LIS will be able to report on the outcomes of this strategy following 2012.

Key information for Labour Inspectorate of the Republic of Slovenia (LIS)

The labour inspectorate supervises the implementation of laws, other regulations, collective contracts and general acts that govern employment relations, pay and other receipts from employment, the employment of workers at home and abroad, worker participation in management, strikes and the safety of workers at work, unless otherwise specified by regulations.

A Chief Labour Inspector heads and represents the inspectorate, organises and coordinates the work of inspectors and, within the framework of his authorities, is answerable for the legality, quality and effectiveness of inspection work. Inspectors operate within the framework of inspectorates organised for individual administrative spheres. The area of employment relations is supervised by the employment inspectorate, and the area of health and safety at work by the health and safety at work inspectorate.

53 For more information: Dr. Mladen Markota: mladen.markota@gov.si

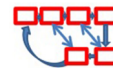


The labour inspectors are required to have a university degree in legal or technical studies, at least five years of working experience and need to pass a professional examination for inspector. Every inspector is obliged to perform a test of professional qualification every three years. Labour inspectors are part of the civil servants system (The Civil Servants Act, Official Gazette of the Republic of Slovenia no. 63/07, 65/08).

The “*Rules on Internal Organisation and Systematisation of the Labour Inspectorate*” define the roles and responsibilities, power of the LIRS inspection services and other organisational units. Thus, the organisation of the LIS includes:

1. Employment relationship inspection (47 inspectors)
2. Health and safety at work inspection (36 inspectors)
3. Social inspection (3 inspectors)

LIS has three support services which provide joint tasks (administrative, professional, technical and other) for the Chief Labour Inspector and all internal organisational units, e.g. legal, administrative and other demanding tasks in the field of training programmes and professional development of staff, communication with the media, financial planning, operations, procurement, implementation of the wage laws, human and other common issues, information technologies issues, analysis and statistics, and various financial, administrative and similar functions. There are 12 regional offices. The head office for the Labour Inspectorate of the Republic of Slovenia is located at Parmova 33, SI-1000 Ljubljana, Slovenia. Phone: + 386 1 280 36 60, Fax: + 386 1 280 36 77, and e-mail: [irsd\(at\)gov.si](mailto:irsd(at)gov.si)



United Kingdom: The UK Health and Safety Executive (HSE)

Setting the context

The United Kingdom (UK) Health and Safety at Work Act 1974 established the simple yet enduring principle that those who create risk are best placed to manage it. This Act led to the setting up of the Health and Safety Commission (HSC) and the Health and Safety Executive (HSE) and established HSE and local authorities (local government that deliver government services within a specified region) as joint enforcers of health and safety law.

On 1 April 2008 the UK government merged HSC and HSE to form a single entity known as the Health and Safety Executive (HSE).

HSE is an independent national regulatory body with a mission to act in the public interest to prevent death, injury and ill health to those at work and those affected by work activities in Great Britain. Its main statutory duties are to:

- ▶ Propose and set necessary standards for health and safety performance.
- ▶ Secure compliance for those standards.
- ▶ Carry out research and publish the results and provide an information and advisory service.
- ▶ Provide a Minister of the Crown on request with information and expert advice.

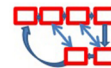
HSE is a non-Departmental Public Body (NDPB) funded through the Department of Work and Pensions. It is accountable to Ministers and Parliament on the delivery of its functions – but not individual regulatory decisions. It works in close partnership with local authorities having mandatory agreed enforcement arrangements.

HSE and local authorities ensure that the health and safety regulatory system:

- ▶ is focused on better health and safety outcomes and not purely technical breaches of the law;
- ▶ makes it as straightforward as possible for business, and in particular, small businesses, to deliver a health and safe working environment;
- ▶ is enforced in a manner which is proportionate to risk;
- ▶ avoids placing unnecessary burdens on businesses which manage health and safety effectively; and
- ▶ maintains a strong deterrent against those who fail to meet their health and safety obligations and put their employees at material risk thereby also deriving an unfair competitive advantage.⁵⁴

Similar to other public sector organisations, HSE will be expected to make substantial savings in the funding it receives from the taxpayer over the four years 2011/12 to 2014/15.

54 <http://www.hse.gov.uk/aboutus/strategiesandplans/delivery-plans/plan1112.pdf>



Step I: Analyse the OSH situation

The performance measurement framework provides an approach by which a labour inspectorate can think about the ultimate outcomes which need to be achieved by analysing the OSH situation or identifying the OSH problem as Step I in the process:

What problem or issue does the labour inspectorate need to address?

What needs to change so that OSH can improve?

The UK Health and Safety Executive (HSE)

HSE has an on-going process of data collection publication and analysis. This data is made publicly available on the HSE website.⁵⁵

Although more current data is available, analysis prior to the development of the latest published strategy⁵⁶ showed that 229 workers were killed and 136,771 employees were seriously injured at their place of work in 2007/08.

Similarly, during the same period, approximately 2.1 million people were suffering from an illness reputedly caused or made worse by their current or past work. However, although the rates of death, injury and work-related ill health have declined for most of the past 35 years, the rate of decline has noticeably slowed.

Impact on the economy: approximately 34 million working days were lost in 2007/08 due to the consequences of accidents at work and work-related ill health.

Looking at the finances, it is estimated that the annual cost to society of work-related accidents and ill health is a staggering £20 billion (approximately 2% of GDP).

Maintaining the status quo was morally, legally and financially unacceptable.

HSE analysis also involves consideration of horizon scanning or futures issues and analysis of major hazards risks.

HSE has a dedicated horizon scanning unit⁵⁷ tasked with identifying future issues that may create health and safety risks and ensuring this evidence informs strategic thinking analysis and planning within HSE.

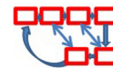
HSE also operates permissioning systems and inspection processes to ensure major hazard risks are properly controlled by those operating in major hazard areas. On-going analysis within each major hazard areas by HSE scientific, engineering and industry experts indicates the issues for consideration as exemplified within the Hazardous Installations Directorate annual plans made available through HSE's website.⁵⁸

55 <http://www.hse.gov.uk/statistics/index.htm>

56 <http://www.hse.gov.uk/strategy/strategy09.pdf>

57 <http://www.hse.gov.uk/horizons/>

58 <http://www.hse.gov.uk/foi/internalops/hid/spc/hid-business-plan-2009-10.pdf>



HSE also operates on-going consultations with key stakeholders within the health and safety system to identify other relevant data or evidence and considers this within its analysis of the OSH situation.

HSE has analysed all this evidence within key industry sectors requiring OSH action because of high current or future risks. For these key sectors individual strategies have been produced that among other things provide an analysis setting out the underlying OSH problems within that sector.

Step II: Establish goal(s)

In order to establish a performance measurement process for a labour inspectorate (LI), it is important that the government level OSH goals/objectives are clearly established and are connected to the mission of the LI.

The OSH goals for governments are usually articulated in their vision, mission and goals.

A labour inspectorate will need to align its strategies with those of its government. Through implementation of its strategies, the labour inspectorate contributes to achievement of the OSH goals of the government.

The UK Health and Safety Executive (HSE)

UK Government Vision:

- ▶ To reduce the burden of health and safety bureaucracy on British businesses whilst maintaining the progress made in improving health and safety outcomes.⁵⁹

UK OSH Mission:

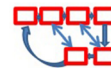
- ▶ The prevention of death, injury and ill health to those at work and those affected by work activities.⁶⁰

UK OSH goals for the whole health and safety system:⁶⁰

- ▶ To investigate work-related accidents and ill health and take enforcement action to prevent harm and secure justice when appropriate.
- ▶ To encourage strong leadership in championing the importance of, and a common-sense approach to, health and safety in the workplace.
- ▶ To motivate focus on the core aims of health and safety and, by doing so, to help risk makers and managers distinguish between real health and safety issues and trivial or ill-informed criticism.
- ▶ To encourage an increase in competence, which will enable greater ownership and profiling of risk, thereby promoting sensible and proportionate risk management.
- ▶ To reinforce the promotion of worker involvement and consultation in health and safety matters throughout unionised and non-unionised workplaces of all sizes.
- ▶ To specifically target key health issues and to identify and work with those bodies best placed to bring about a reduction in the incidence rate and number of cases of work-related ill health.

59 <http://www.dwp.gov.uk/docs/good-health-and-safety.pdf> and <http://www.dwp.gov.uk/docs/lofstedt-tor.pdf>

60 <http://www.hse.gov.uk/strategy/document.htm>



- ▶ To set priorities and, within those priorities, to identify which activities, their length and scale, deliver a significant reduction in the rate and number of deaths and accidents.
- ▶ To adapt and customise approaches to help the increasing numbers of SMEs in different sectors comply with their health and safety obligations.
- ▶ To reduce the likelihood of low frequency, high impact catastrophic incidents while ensuring that Great Britain maintains its capabilities in those industries strategically important to the country's economy and social infrastructure.
- ▶ To take account of wider issues that impact on health and safety as part of the continuing drive to improve Great Britain's health and safety performance.

These goals are pursued where it matters to most effectively meet the OSH Objectives:⁶⁰

- ▶ To reduce the number of work-related fatalities, injuries and cases of ill health.
- ▶ To gain widespread commitment and recognition of what real health and safety is about.
- ▶ To motivate all those in the health and safety system as to how they can contribute to an improved health and safety performance.
- ▶ To ensure that those who fail in their health and safety duties are held to account.

Establish baselines and timelines for goals identified in Step II

Performance can only be measured if there is something to which it can be compared, i.e. a baseline serves as the starting point for comparison. Baselines can be established, for example, by looking at the achievements of other, similar programs that are considered leaders in the field (benchmarking).

The UK Health and Safety Executive

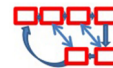
Changes in industry composition and other economic, structural and social factors strongly influence the reported levels of work-related deaths, injuries and illnesses within a country. Consequently measures of these do not directly translate to a reliable indicator on their own of a country's OSH performance. Given this, the British OSH system no longer has publicly stated outcome targets. Rather data is collected on a range of measures comprising predominantly input and outputs measures but also supplemented with both leading and lagging indicators. Trends in these are assessed internally to monitor OSH performance. Prevailing trends over a number of years, depending on indicator type and context, is used to assess performance as it is recognised that single year outcome measures can be subject to relatively large random annual fluctuations. The OSH regulator also encourages industry to set their own health and safety goals and targets and collect indicator data to monitor progress against these.

This is illustrated below with three examples although there are many others.

Example 1: Waste and recycling industries

HSE has supported WISH a multi-party forum made up of organisations representing the waste and recycling industry to agree and set targets for the industry to improve health and safety performance. WISH itself monitors and reports progress against these targets. Full details can be found in the attached reference.⁶¹

61 <http://www.hse.gov.uk/waste/charter.htm>



Example 2: Quarries

The Quarries National Joint Advisory Committee (QNJAC) is a tripartite committee (HSE, employers and employees) that among other things agrees sets and monitors health and safety targets for the quarries industry. Full details can be found in the attached reference.⁶²

Example 3: Chemical industries

HSE supported the Chemical industries Association, the largest organisation representing industrial chemical producers, and importers, to produce guidance on, and promote use of, measures of process safety within the industry to self monitor health and safety performance. Full details can be found in the attached reference.⁶³

Step III: Allocate resources [inputs]

“Resources” are usually expressed in the number of staff and the budget allocated to a labour inspectorate. This is referred to as “input” to the activities undertaken to address the OSH situation.

The UK Health and Safety Executive (HSE)

In 2011, the UK Health and Safety Executive (HSE) employed over 3,000 full-time equivalent staff.⁶⁴ HSE’s Net Resource Budget for 2011/12 is £198.7 million.

The OHS strategy for Britain is for the whole OHS system. One of the key strategies of the HSE is to motivate others in the OHS system to contribute. However, the resources allocated by others are not known.

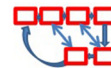
Step IV: Undertake activities

A labour inspectorate needs to develop strategies which are aligned with those of its government’s OSH goals. The labour inspectorate then implements its strategies through specific activities or operational strategies, thus, the labour inspectorate contributes to achievement of the OSH goals of the government.

62 <http://www.hse.gov.uk/quarries/programme.htm>

63 <http://www.cefic.org/Documents/IndustrySupport/CIA%20Process%20Safety%20-%20Best%20Practice%20Guide.pdf>

64 See section 3 of business plan
<http://www.hse.gov.uk/aboutus/strategiesandplans/delivery-plans/plan1112.pdf>



The UK Health and Safety Executive (HSE)

Key strategies of the UK Health and Safety Executive⁶⁵

- 1 Reform how and where HSE works to realise the best achievable impact on the health and safety system, to deliver functions more efficiently and live within budget.
- 2 Provide public assurance that the health and safety risks within those high hazard industries which are strategically important to the country's economy and which have the potential to cause catastrophic harm to their workers and the public are effectively managed and controlled.
- 3 Motivate others in the health and safety system to address their responsibilities in a common sense and proportionate manner and contribute to improving health and safety performance.
- 4 Investigate work-related incidents and ill health and take enforcement action to prevent harm and to secure justice when appropriate.

Operational strategies of a labour inspectorate are more specific and directed plans of action which a labour inspectorate undertakes to support the OSH mission, vision and strategic goals of the government. The operational strategies are supported by specific activities of the labour inspectorate.

The UK Health and Safety Executive (HSE)

Operational strategies of the UK Health and Safety Executive⁶⁶

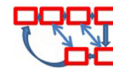
- 1 To strengthen HSE focus on industries where there is major hazard risk and or risks are highest, e.g. chemical and off-shore oil.
- 2 For the 900,000 non-major hazard workplaces which have a comparatively high rate of injury (including fatal injury) and/or occupational disease (e.g. construction, agriculture, some manufacturing, waste and recycling, and quarrying) HSE will:
 - increase joint initiatives with industry to promote safe and healthy workplaces;
 - target inspections more effectively on areas of greatest risk;
 - reduce the overall number of proactive inspections for businesses in lower risk areas who meet their legal obligations;
 - introduce the recovery of HSE costs from businesses that put their employees and the public at risk.
- 3 For the low risk enterprises (e.g. offices, shops, charity shops, and classrooms HSE provides a single, easy to use guidance *Health and Safety Made Simple* which takes the enterprises quickly through their basic health and safety duties describing in plain English "what to do" and "how to do it".⁶⁷

65 <http://www.dwp.gov.uk/docs/good-health-and-safety.pdf> and

<http://www.hse.gov.uk/aboutus/strategiesandplans/delivery-plans/plan1112.pdf>

66 <http://www.dwp.gov.uk/docs/good-health-and-safety.pdf>

67 <http://www.dwp.gov.uk/docs/good-health-and-safety.pdf> and "Health and Safety Made Simple" <http://www.hse.gov.uk/simple-health-safety>



Step V: Measure outputs

The direct products/services delivered, or activities undertaken, by a labour inspectorate is referred to as “output”. For example, the number of targeted inspections conducted annually by a LI. Usually, a labour inspectorate develops these specific activities as part of the overall OSH strategies which have been created to address the goals and targets set out in Step II.

Output (the activities expended by the LI) and resources used to undertake these activities provide the LI with a calculation of efficiency of the LI.

The UK Health and Safety Executive (HSE):

Some of the output measures the UK Health and Safety Executive will use to monitor its own performance and the performance of the wider health and safety system are:⁶⁸

a. Monitoring the value for money of HSE

- ▶ Amount of grant-in-aid and the proportion of HSE’s expenditure funded by grant-in-aid.
- ▶ The cost of operating HSE – including staff costs, bought-in goods and services and property over time and against projected cost.
- ▶ Number of employees in HSE including breakdown by function, grade and contract type.
- ▶ Cost of corporate services (including HR, finance, information and communications technology, communications and procurement) as a percentage of the cost of HSE.
- ▶ Property cost per square metre and per employee.

b. Monitoring the output of HSE’s work

- ▶ The number of milestones within the delivery plan which are on track and being delivered.
- ▶ The number of web hits for the online risk assessment toolkits.

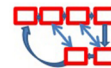
As noted in Step III (above) HSE encourages industry and industry groups to monitor their own Health and Safety output measures.

Step VI: Measure outcomes

Measuring outcomes is a measure of program effectiveness. The question of “is the LI effective in meeting the goals, objectives and targets as set out in Stage II?” is answered by measuring outcomes.

These outcomes are often measured in “rate” for example the “rate of reduction of injuries or absence from work, per worker population” against the targets set out in Step II (above).

68 <http://www.hse.gov.uk/aboutus/strategiesandplans/delivery-plans/plan1112.pdf>



The UK Health and Safety Executive (HSE)

Monitoring the performance of the health and safety “system”⁶⁹ in Great Britain against the OSH objectives from Step II includes consideration of the trend in:⁷⁰

- ▶ the incidence rate of fatal injuries in the workplace;
- ▶ the incidence rate of non-fatal injuries in the workplace;
- ▶ the incidence rate of work-related ill health;
- ▶ the number of potentially dangerous events in the nuclear industry and specified dangerous occurrences in the offshore oil and gas and onshore COMAH sectors, comprising: the number of events reported by licence holders which are judged to have the potential to challenge a nuclear safety system; the number of major and significant hydrocarbon releases in the offshore oil and gas sector; and the number of relevant RIDDOR reportable dangerous occurrences in the onshore sector;
- ▶ the ratio of positive/negative messages within the media in relation to health and safety and/or HSE;
- ▶ the percentage of HSE prosecution cases which result in a conviction and resulting levels of fines and media coverage;
- ▶ the number of notices issued.

As noted in Step III, HSE encourages industry and industry groups to monitor their own health and safety outcome measures.

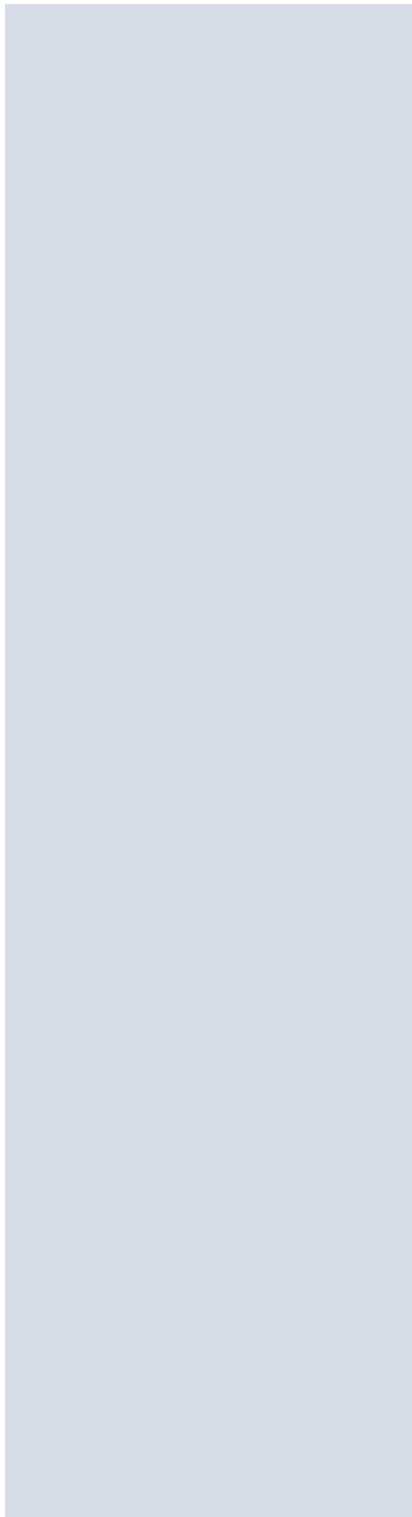
69 “system” here refers to all those programs, organisations working together as an interconnected OSH network towards achieving OSH goals.

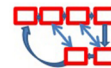
70 Statistical measures of outcomes <http://www.hse.gov.uk/statistics/index.htm> and <http://www.hse.gov.uk/aboutus/strategiesandplans/delivery-plans/plan1112.pdf>



PART VII

Appendices





Audits and evaluations:

7 OSH performance measurement and audit: What is the difference?

The following section discusses the differences between “*Performance measurement*” and “*System Audit*”, and how these two methodologies work together.

7.1 OSH performance measurement

“*Performance measurement*” for labour inspectorates as defined earlier in this handbook is:⁷¹

“the ongoing monitoring and reporting of labour inspectorate progress towards pre-established OSH goals or outcomes (e.g. in terms of an improvement in health situation, or reduction in workplace accidents).

To assess the performance of labour inspectorates’ activities implies that one must be able to distinguish between two different OSH situations. The ultimate goal of this assessment would be to measure change in the OSH situation that is directly and unambiguously a result of labour inspectorate interventions.

There will always be a time span between interventions and measurable changes of OSH in an enterprise or within an industry. Measurement of performance will therefore have to take place over time. It is also important to verify that any changes in the OSH situation are sustainable.

The conceptual framework that was discussed earlier in this handbook is a useful tool for assessing the outcome or effects of labour inspectorate activities. Other performance measurement models that are available are presented and discussed in more detail in the following sections of the Appendix. However, in general, the various models all have steps similar to the ones shown in the framework below. Each stage depends on the preceding stage and parameters describing each stage have to be defined:

Example

The final stage – “*Measure Outcomes*” – is directly linked and measurable against the goals of the labour inspectorate, its strategic plan, statutory functions and/or vision.

7.2 OSH Audit

ILO defines **audit**⁷² in the context of OSH as being:

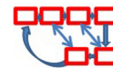
“a systematic process (evaluation) which is conducted to verify whether OSH–MS activities have been carried out correctly in an organisation against certain policies and procedures”.

In March 2008, the ILO⁷³ released an audit methodology, and agreed to the following actions:

71 See Glossary at the end of the handbook for complete list of definitions

72 Section 3.13.3, “Guidelines on occupational safety and health management systems” ILO-OSH 2001

73 LABOUR INSPECTION AUDITS –A METHODOLOGY (issued by ILO, March 2008 in its programme and budget)



“...to help reinvigorate and modernise labour inspection, including a joint immediate outcome to increase member States’ capacity to carry out labour inspection. This joint outcome contained specific targets for carrying out tripartite labour inspection audits,...”

The methodology contained in the document is based on experience gained in previous audits and in other related actions carried out by dialogue and safe work. Most importantly, however, the methodology does not provide a basis for criticism of specific national legislation, policies programs, or administrative procedures per se, but rather enables auditors to analyse the system for applying them in practice and to compare them with other national standards.

The intention of the audit is to assess if the national OSH system is adequate and functioning so that one can see if there exists a potential for OSH improvement in specific countries.

In Europe, the Nordic Countries and elsewhere, a “Scoreboard” model has been used as an audit tool to:

- Provide an overview of the development of the LI in relation to international criteria.
- Achieve increased transparency and knowledge of the situation and implementation of ILO conventions.
- Enable benchmarking regarding trends in the OSH situation.
- Enable countries to be inspired and learn from each other.

A *Scoreboard* might indicate if the Labour Inspection System (LIS) is developing as presupposed and in a sound way, for example, according to the ILO Convention 187 on OSH culture. It might also be used as a tool for comparison of OSH situation between countries. It is not meant as a tool to measure the effectiveness or outcomes of the activities of a labour inspectorate.

7.3 Senior Labour Inspectors Committee (SLIC) audits

SLIC issued a document (in 1994, and revised in 2004), with the title *“Common principles for Labour Inspection in relation to health and safety in the workplace”*.

The document is meant as a basis for evaluation of national inspection systems, as is summarised in the introduction:

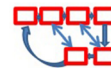
*“The Community Strategy calls for effective, equivalent inspection and monitoring of the implementation of legislation in MS, and sees the **evaluation of national systems inspection** by reference to the Common Principles as an important element in the framework of consistent implementation.”*

To support the application of this methodology, SLIC has developed a questionnaire⁷⁴ in which it describes the purpose of the evaluation as follows:

1.0 Purpose and general approach to evaluation

1.1 The basic purpose of evaluation is to review the capability of the labour inspection system in the country to be evaluated (the host country) to implement and enforce EU Directives on health and safety at work.

74 EVALUATING THE POLICIES AND PRACTICES IN OCCUPATIONAL HEALTH AND SAFETY INSPECTION



1.2 Besides looking at the adequacy of the systems in place for inspection by amplifying the information given in the answers to the “Common Principles” Questionnaire, the wider purposes of evaluation are to promote exchanges of information, ways of working and experience between Member States, and thereby to promote greater consistency.

1.3 Paragraph 13 (and other sections) of the “Common Principles” set out the need for evaluation and specify what it should involve. It should include, at least, an assessment of: the organisational structure, the administrative and operational procedures, the standards for inspection and their application, the resources available, the personnel and their training and the systems for reporting, record keeping and information collection. It also requires on-site inspection.

This type of audit, conducted through a third party objective review, usually as tripartite labour inspection system audits, assist governments in improving their policies and systems. Examples of these types of audits can be found in the evaluation reports carried out (2008 and 2009) in Sweden and Moldova by SLIC.⁷⁵

Much experience has already been gained from audits also carried out by the ILO’s ***In Focus Programme for the Promotion of Social Dialogue, Labour Legislation and Labour Administration*** (IFP/Dialogue) and the ***International Programme on Safety and Health at Work and the Environment*** (SafeWork). Examples of these audits include those carried out in Argentina (1989) Panama (1995), Haiti (1998), Bolivia (2000), Luxembourg (2002) and Latvia (2005), as well as partial assessments in Brazil and Chile in the early 1990s.⁷⁶

7.4 Summary: OSH audit and performance measurement working together

An audit or evaluation of the integrity of the labour inspection systems [a system audit] provides useful and important information as to whether the labour inspectorate is performing in line with internationally accepted procedures and conventions.

A system audit will provide the labour inspectorate with advice as to how their policies and procedures can be improved – necessary information to achieve a high performing labour inspectorate.

Once the audit has been conducted the labour inspectorate can proceed with confidence that it has processes and systems to operate as a quality organisation. Then the labour inspectorate can put in place a performance measurement framework to evaluate its effectiveness against OSH outcome goals. A good performance measurement system for the labour inspectorate would include both ongoing performance measurement and periodic evaluation.

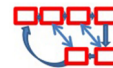
A brief history of performance measures

Although there is much information available on performance measurement in general, there is relatively little which describes measurement in the context of health and safety which labour inspectorates can apply to their particular circumstances.

In 1992 Robert Kaplan and David Norton introduced the Balanced Scorecard. The basic concept of this model is to “translate business mission accomplishment into a critical set of measures distributed among an equally critical and focused set of business perspectives”.

⁷⁵ need a reference for these reports

⁷⁶ ILO PROGRAMME AND BUDGET 2008-09, LABOUR INSPECTION AUDITS – A METHODOLOGY



Since Kaplan and Norton introduced the Balanced Scorecard concept, many variations of the concept have surfaced, due mainly to the fact that no two organisations are alike and their need for balanced measures and their identified business perspectives vary.

Regardless, the two key components of all of these frameworks are a balanced set of measures and a set of strategically focused perspectives. Examples of frameworks that use the balanced approach are: the Balanced Scorecard, performance dashboards, and the Malcolm Baldrige National Quality Award criteria. These are described below.

8.1 The Balanced Scorecard

In 1992, Robert Kaplan and David Norton introduced the Balanced Scorecard concept as a way of motivating and measuring an organisation's performance. The concept takes a systematic approach to assessing internal results while probing the external environment. It focuses as much on the process of arriving at successful results as on the results themselves. Under the Balanced Scorecard methodology, the processes that contribute to desired results are viewed cross-functionally. Measures that make one function look good while deflating another are avoided, thus minimising negative competition between individuals and functions. The Kaplan/Norton Balanced Scorecard asks questions from four interconnected business perspectives:

- 1 Financial – How do we look to our stakeholders?
- 2 Customer – How well do we satisfy our internal and external customer's needs?
- 3 Internal business process – How well do we perform at key internal business processes?
- 4 Learning and growth – Are we able to sustain innovation, change, and continuous improvement?

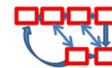
The Balanced Scorecard provides a way for management to look at the well-being of their organisation from these four identified perspectives. Each perspective is directly tied to organisational strategy, and strategically linked performance objectives and measures flow from these perspectives, providing the user with an integrated performance measurement system.

8.2 Performance Dashboards

A performance dashboard is an executive information system that captures financial and non-financial measures as indicators of successful strategy deployment. In France, companies have developed and used the Tableau de Bord, a dashboard of key indicators of organisational success, for more than two decades. The Tableau de Bord is designed to help employees test the organisation by identifying key success factors, especially those that can be measured as physical variables. Many dashboards are indexed measures that roll-up performance in a weighted manner to a few select gauges based on many measures, or inputs.

8.3 The Malcolm Baldrige National Quality Award Criteria

In 1988, the Malcolm Baldrige National Quality Award (MBNQA) was instituted to promote total quality management (TQM). Since that time, TQM has gone through many changes and now generally is referred to by other names, such as "continuous improvement" or "reengineering." All Baldrige winners integrate TQM philosophies and practices into their organisation's day-to-day operations. The Baldrige standards call for a balance among customer satisfaction, employee satisfaction, and business results. The award is based on criteria created through a public-private partnership and focused on three business factors:



- 1 Approach (the processes used to run an organisation).
- 2 Deployment (the execution of an approach).
- 3 Results (the outcome of the approach and deployment).

Based on a 1000-point scale, the award criteria are divided into seven perspectives: Leadership, Strategic planning, Customer and market focus, Information and analysis, Human resource focus, Process management, and Business results.

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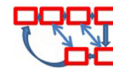
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