Recommendations for introducing efficient performance system at Latvian state fire and rescue service

Report

Component 2.

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Ministry of the Interior of the Republic of Latvia

HAUS

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1. Key recommendations

The main recommendation of the expert group is to start by defining general needs of customers and the desired impact to society. In addition, the goals of working areas must be set.

- **ICT system recommendations**

The expert group considers important to stress the need of linking ICT-systems of SFRS, police and other involved agencies. The most important objectives of linking are: 1) information about risks 2) information about causes 3) avoiding duplication of data collection.

- **Strengthening co-operation**

In order to achieve goals and have greater impact in society, it is crucial to describe processes in which other agencies and actors play important roles. The cooperation should be pre-planned, targeted and of mutual interest. In particular, the cooperation between police, ambulance, social workers and fire services in preventive activities and risk mapping should be one of the priorities.

- **Legislative recommendations**

The expert group suggestion is to assess whether stipulating service levels (eg response time) in legislative acts could have unnecessary restraints and undesired impacts. One of the preconditions (using the example of response time) could be the publication of realistic response times on the Latvian map. This enables to achieve the conformity with public expectations. The service levels should still be agreed, targeted and publicly available, but instead of legislation, we suggest using other policy instruments (eg development plans).

It is also important to pay more attention to the regulations of data collection and exchange for prevention and supervision activities. The cooperation between agencies is important and effective, but rules of data protection should be considered.

2. Information based steering process

The most important goal associated with the development of national metrics for rescue services is that of integrating the information produced by the metrics with the systematic development work corresponding to the information needs jointly determined by the rescue services. The development of rescue services promoted through the information produced by commensurate metrics enhances the steering by information of the rescue services sector.

Steering by information refers to steering based on sharing and conveying information, affecting the activities being steered. Steering by information has an enabling structure and it`s based on interactivity. Steering by information is a form of steering seen necessary along steering by norms and steering by resources, and it works best when integrated with changes taking place in other forms of steering. It has been considered important regarding steering by information that it includes more information on productivity and impact and that this information is used more for steering activities.

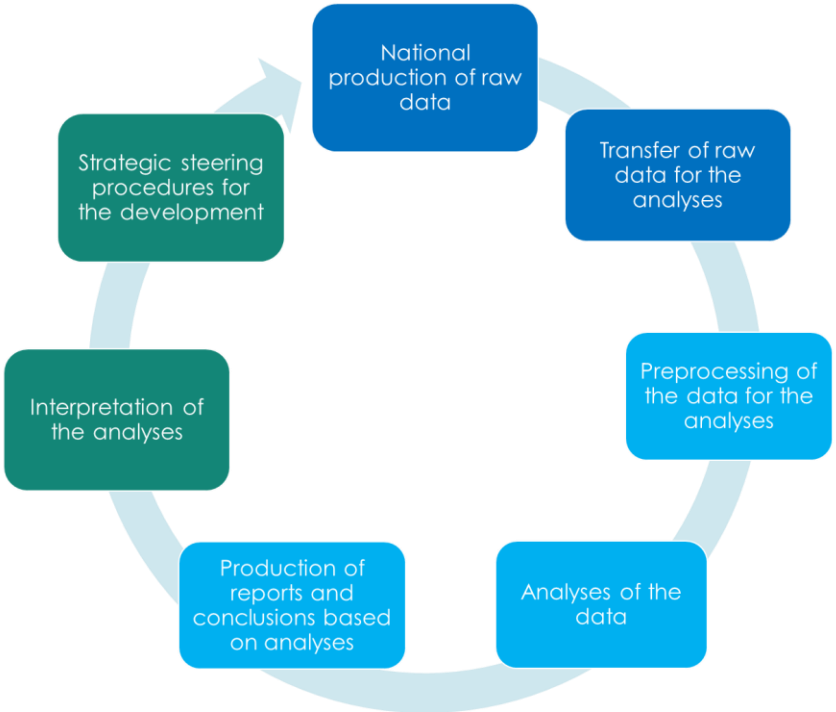


***Figure 1**. Process of steering by information in rescue services.*

The process of steering rescue services by information illustrated in Figure 1. In line with the process description, it is a prerequisite for the functionality of the national assessment system that information concerning the entire rescue services is produced in compliance with uniform principles of usage. Compilation of the information requires matching the information systems of different actors in the rescue services.

The Ministry of the Interior will be responsible for interpreting the information produced in relation to the reference frame of development expressed through the national targets of the strategy of rescue services and for steering the entire rescue services in accordance with steering measures based on the interpretation. The rescue services will interpret and utilise the information produced for developing operations in their own frame of reference. In relation to other steering procedures used by rescue services, steering by information must be seen as a dynamic form of steering which fits in with other current steering forms used by rescue services in order to achieve the best possible steering result.

3. Introducing performance measurement indicators

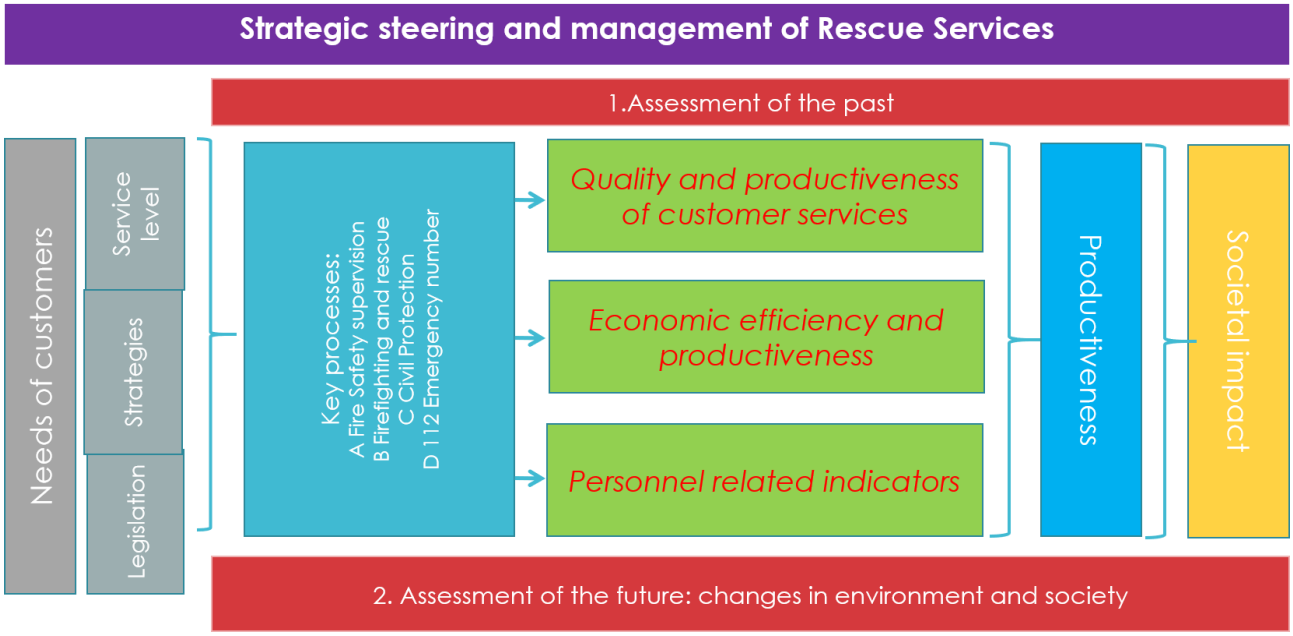


Figure 2. *Map of indicators*

Map of indicators

This model brings out additional dimensions of an indicator system. Starting from left of the drawing, it shows that there is a need of measuring compliance with customers' needs and expectations, which is expressed in legislation, strategies/development plans and service levels. Service level can be defined as a promise, given to target group or customers. It shows how much, how well, how fast and/or how frequently this service is provided. Service level can be stipulated in legal act or planning document. The next step is to define indicators that express the quality of providing services, economic efficiency of services and personnel related aspects. These three categories produce us information on the productiveness of the organisation and societal impact in long-term.

Assesment of the past and future

Figure 3. *Assesment of the past and future*

Assessment of the changes in the environment and society

Population	• Amount of population and proportions of age groups • Predictions of growth or decrease the population
Native languages	• Distributions of the population between the cities/rural areas, the daily variations in the number of citizens • Infrastructure • Amount of buildings • New buildings and planned building activities • High buildings • Wooden buildings • Underground Infrastructure
Traffic	• Public transport, light and heavy transport, transport of hazardous substances, mode of transport (land/rail transport, air traffic, traffic on water), new traffic initiatives
Environment	• Central groundwater areas, flood risk areas, land use and nature reserves

PESTLE analysis

PESTLE analysis is a tool for defining factors from external environment that have impact on organisation and influence the achievement of goals. The indicators we use for assessing the past are often influenced by external factors and it is important to monitor those factors regularly for finding new ways to counter the undesired impact, to magnify the positive effect of a factor and/or address the problem to cooperation partners.

In the first phase of the analysis, the key factors should be described. The best result is achieved by broad involvement of experts/servants, as the impact is expressed differently in different levels (service development, service providing) and areas/key processes. Possible methods of analysis are:

1. interviews and/or discussions;
2. individual expert analysis;
3. workshops and seminars.

Factor	Category and the name of the factor (political, economic, social, technological, legal (can be combined with political), ecological).
Description of the impact to the working area/key process	How this factor is influencing the organisation/activity and the achievement of goals (desired impact). Threat or opportunity.
Assessment of the current situation	Statistics. The main aspects of progress and/or bottlenecks in recent years.
Forecast of the future impact	The prediction of future development of the factor and the impact.
Relative importance	1- very important; 2 – moderate importance; 3 – small importance Brief explanation should be added.
Likelihood of the predicted impact	Likelihood that the factor will have a predicted impact. 1 – very likely; 2 – moderate likelihood; 3 – not very likely.
Need for additional research	References to existing researches about the factor and its impact; the description of the need for additional research.

In the second phase, based on the factors, the main needs for development and input to strategies/development plans can be defined.

Significant problem	Name of the problem. Based on the relative importance and likelihood of the impact to organisation/activities/goals.
Solution	What is needed to solve the problem.
Reason	Why is the problem important and what can happen if we don't solve the problem in a certain period?
Financial need	Does the solution require additional financing?
Benefit/impact	What is the benefit of realizing the solution? What is its social impact?
Involved parties	What partners influence the manifestation or solving the problem the most?

After finding the factors, it is also important to define the data collection and source, the responsibility and frequency of monitoring/analysing as well as the connections with planning process and ICT-systems.

National Risk Assessment

In accordance with Article 6 of the Decision, Member States shall develop risk assessments at national or appropriate sub-national level and make available to the Commission a summary of the relevant elements thereof every three years. Based on Decision No 1313/2013/EU of the European Parliament and of the Council on a Union Civil Protection Mechanism.

The Union Civil Protection Mechanism underlying the preparation of the national risk assessment covers people, the environment and property against all kinds of natural and manmade disasters, both within and outside the area of the Union (civil protection).

The national risk assessment aims to take into consideration the impact of disruptions on the vital functions of the society and identify risks that may have a wider national impact. This means risks that have to be managed through resource coordination between several authorities – regionally or nationally at the very least, or even by requesting assistance from other countries. The focus is on internal risks and risks affecting the immediate neighboring area.

International reporting recommendations

One aspect to consider while building up the performance indicator system, is the need for reporting to international organizations. Some of the examples of such reporting needs are listed below:

Sendai framework for Disaster Risk Reduction[1] - Reporting the progress on achievement of seven global targets of disaster risk reduction.

CTIF[2] - Statistics on fires, consequences and capabilities.

European Commission[3] - Reporting to European Commission on implementation of 112-service (awareness of 112-service, average time of answering, accessibility to users with disabilities).

Central Statistical Bureau of Latvia – Different statistical indicators of fires, reported to Eurostat through national statistic offices.

Nordic Fire Statistics[4] - Nordic Fire Statistics is a collaboration between the national fire authorities in Denmark, Estonia, Finland, Iceland, Norway and Sweden and contains statistics related to fires.

[1] https://sendaimonitor.unisdr.org/
[2] https://www.ctif.org/commissions-and-groups/ctif-center-fire-statistics
[3] https://ec.europa.eu/digital-single-market/en/112-your-country
[4] www.nordicfirestatistic.org

Nordic Fire Statistics is intended to help when making comparisons of the fire statistics in the Nordic countries. The statistics are based on reports from local fire brigades together with data from other sources. Data is available for 2010-2017.

Fatal fires - Statistics on fires where at least one person dies within 30 days due to injuries from the fire, typically from burns or the toxic effects of smoke. Fire deaths - Statistics on deaths due to injuries from fires. A fatal fire will have one or more fire deaths. Building fires - Statistics on fires that takes place in a private or public building.

In addition, we recommend analyzing the study of "Fatal residential fires in Europe"[5] (prepared by Brandweeracademie of Netherland and European Fire Safety Alliance), that contains detailed data collecting aspects to consider using for more effective fire prevention.

4. Introducing performance measurement indicators

Indicators are needed mainly for assessing the achievement of goals, for supporting decision-making processes and for transforming business strategy measurable. There are many ways of setting goals and indicators. Estonian Rescue Board has used balanced scorecard model to define the impact to society and the next steps to achieve it.

- **Impact to society** – what is the state of safety and the customers' expectations towards rescue service
- **Supporting processes** – what are the critical processes to ensure the achievement of impact
- **Supporting organization** – what are the most important characteristics of the organisation that ensure the functioning of the processes
- **Supporting finances** – what are the key aspects of financing that must be in focus in the next period to ensure the good health of the organisation

For ensuring the completeness of the set of indicators for each working area/key process, the Finnish model (Figure 2) can be used.

The main recommendation of the expert group is to start by defining general needs of customers and the desired impact to society. Also, the goals of working areas must be set. However, based on the documentation review, some indicators in four SFRS working areas are proposed. The sets of indicators are proposed in prioritized order. While increasing measuring capability and before implementation of all proposed indicators, we recommend using internal expert group assessment for evaluating the progress. This is to avoid negative side-effects of partial measurement.

Fire Safety Supervision
before setting indicators, defining sub-tasks of supervision should be considered: a) Process management. Assessment of effectiveness and development. Using risk-based operating environment evaluation and target group choosing. b) Safety education and advice. Evaluation of the realization of education and counselling activities, their effectiveness and development. c) Supervision and inspection activities. Evaluation of the realization of inspection, its effectiveness and development. d) Determination of accident (fire) causes and other circumstances. Information quality produced for preventive purposes.
List of indicators to be considered using: • Number of fires (technical reasons) in buildings with use permits received in last 5 years • Number of fires started by heating systems • Share of "not available" causes from all fires • Accordance of safety procedures with requirements • Automatic Fire Alarm Systems (AFAS) false alarms per building • Number of visitors of safety websites • Safety campaign visibility in target group

[5] https://www.ifv.nl/kennisplein/Documents/20181120-BA-EFA-Fatal-residential-fires-in-Europe.pdf

- Fire safety awareness index of population
- Change in attitude and behaviour after the safety campaign
- Number of home visits (safety counselling)
- Percentage of home visits in risk groups
- Number (and ratio) of fires in visited homes
- Change of situation in visited homes (based on re-visits)
- Target group satisfaction (safety inspections)
- Target group satisfaction (prevention trainings, home visits, safety days, other prevention activities)

Prioritizing principles and explanations:

1. The priority is to collect data of accidents, their causes and other circumstances. Accident data is the basis for setting targets and choosing target groups for preventive activities. To ensure consistent working with data quality, the compliance of information with its consumers' needs in decision-making processes should be measured.
2. If the standard procedures are set to carry out safety supervision, the compliance with those standards would indicate important preconditions to achieve goals at strategic level.
3. We consider necessary to point out the measurement of AFAS false alarms. AFAS false alarms are spending resources of rescue service and decreasing reliability of safety systems among population.
4. Estonia has developed an index of fire safety awareness of individuals that consists of four blocks of questions: a) knowledge (risks, primary activities) b) attitudes (necessity of measures) c) behaviour (measures decreasing risk) d) preventive behaviour (other adapted safety measures). Estonian Rescue Board can instruct the adaptation and implementation of the measurement system. (more information on http://www.evaprem.eu/comparison/appendix)
5. When conducting safety campaigns among population, we suggest arranging preliminary and follow-up studies for assessing not only the visibility but also impact.
6. When conducting different prevention activities, it is important to assess reaching the target group, their attitudes towards activities and the achievement of desired impact.

Fire-fighting and rescue

Sub-tasks of the working area:

a) Preparedness. Plans have been prepared and updated. Planning is risk-based and knowledge-based.
b) Fire and rescue operations. Resources and decisions match requirements. The rescue is effective.
c) International rescue work. Fulfilling the requirements of EU Civil Protection Mechanism. Ability to receive and provide cross-border assistance.

List of indicators to be considered using:

- Response time (tests and real accidents)
- Response readiness time (tests and real accidents)
- Response time of volunteers
- Number (%) of properly filled incident reports
- Number of rescued people
- Preparedness time of volunteer stations
- Performance results of physical exercises
- Time of standard procedures (tests and real accidents)
- Number of occupational accidents in rescue work/in fire station
- Customer satisfaction (excluding accidents with fatalities)
- Number of trained rescuers for receiving/providing international assistance
- Value of saved property[6]
- Value of saved environment

Prioritizing principles and explanations:

1. One of the most important public expectations for rescue service is fast response. The accuracy of measurement is often ICT-dependant; therefore, we suggest using random measurements of different phases also in test situations.

[6] Reasearch file of Estonian example is attached to the report and ERB is open for further discussions.

2. Data collection for preventive purposes starts on scenes of accidents. Setting relevant indicators is important to ensure the data quality.
3. The number of rescued people is an indicator that cannot be used as a target, but it will indicate the provided value to society. In the same category are indicators of saved property and the environment. In consideration of complexity, we recommend leaving those two last in the list.
4. Important preconditions for fast and effective response are physical capability and the skills to carry out standard rescue procedures.
5. For balancing the recklessness and skilful response, we advise to set an indicator of occupational accidents in rescue service.
6. Customer satisfaction with provided service enables to get direct feedback from service users and to use this information for continuous service improvement.
7. Capability of host nation support and receiving international assistance in major accidents would be important indicator of preparedness.

Civil protection

Sub-tasks of the working area:

a) Disaster preparedness in society. Cooperation and collaboration in different situations.
b) Disaster preparedness of rescue service. Plans, reserve supply and other resources for dealing with major accidents and disruptions of vital services.

List of indicators to be considered using:

- Percentage of adopted measures (prescribed by rescue service) in continuity and resilience plans
- Number of incidents per high risk company and objects (incl SEVESO companies)
- Compliance with requirements of crisis management exercises
- Disaster preparedness index level of population and rescue service employees
- Stakeholder´s (agencies) satisfaction with cooperation (how other actor sees co-operation with SFRS)
- Population accessibility of early warning systems

Prioritizing principles and explanations:

1. It is important that the conclusions from risk analysis reach to plans and activities and are transformed into real safety and security. If the rescue service take part in a civil protection planning process with other involved parties, its influence should be assessed.
2. One of the indicators of disaster risk level in the area is the average number of different incidents in companies that have requirements from SEVESO directive. The number is addressing the need of additional supervision and other measures to decrease the risk.
3. Crisis management exercises should point out the shortcomings to deal with. Therefore, the framework and requirements based on national risk analysis should be followed as well as the system of lessons learned and quality assessment.
4. Disaster preparedness of a country depends on capabilities of different parties and there should be system of assessing it. Estonia has developed an index of disaster preparedness of individuals that consists of four blocks of questions: a) knowledge (risks, primary activities and resources) b) attitudes (probability of actions) c) preparedness (reserves and supplies). Estonian Rescue Board can instruct the adaptation and implementation of the measurement.
5. The assessment of cooperation with institutions that have roles in total preparedness is an important precondition and can be developed in a more complex measurement system.

112 emergency number

Sub-tasks of the working area:

a) Processing emergency calls. Processing information received via 112, giving risk assessments and orders to respond to relevant agencies.
b) Processing non-critical information. Processing information where life, health and property are not at direct risk.

List of indicators to be considered using:

- 112 answering speed (% of cases, answered in 10 seconds)
- Time of dispatching resources
- Number of 112-calls per inhabitant
- Awareness of 112-number

• % of blind calls • Satisfaction with 112-service • Satisfaction with information services
Prioritizing principles and explanations: 1. One of the most important public expectations for rescue service is fast response. The service level of answering 112-calls in Estonia is 10 seconds; the average time to answer the call in Estonia is 5 seconds. 2. The number of 112-calls is showing the risk level in society. Note: the severity of calls should be comparable over time or regions. The information is used for preventive and communicative purposes. 3. The awareness of single emergency number 112 is a precondition for fast response in case of an accident. In combination with the awareness of its purpose and the level of non-critical calls, the information is indicating the need for call processing resources, including ICT systems. 4. Customer satisfaction with provided service enables to get direct feedback from service users and to use this information for continuous service improvement.

5. Experiences of other countries in collecting data

Estonia

Estonian way to collect data (incl., examples of indicators, ICT-systems) - activities for collecting data, budgetary dependency - approximate costs per year for maintenance of effective performance measurement system

Estonian Rescue Board´s (ERB) main information system is Rescue Information System (RIS). The fundamentals of the system are described in the Rescue Act[7] § 9.

§ 9. Rescue information system

(1) The rescue information system is a database included in the state information system and used for processing: 1) data concerning operations and proceedings related to resolving a rescue event for the purpose of efficient and speedy performance of the functions of the Rescue Board, and data concerning supervision and coordination proceedings;

2) data concerning people who have died or been injured in the course of a rescue event, data collected in the course of training and notification, and data collected about a site checked with the consent of the person upon fire safety consultations to a possessor of a housing and about the possessor of the site for the purpose of establishing and maintaining a safe living environment, preventing threats and planning the activities of the Rescue Board.

(2) The following shall be entered in the rescue information system:
1) data concerning rescue work and explosive ordnance disposal;
2) data concerning people who have died or been injured in the course of a rescue event;
3) data concerning rescue servants;
4) data concerning persons who have participated in a rescue event;
5) data concerning supervision and coordination proceedings and prevention work;
6) data concerning fire safety consultations to a possessor of a housing and concerning prevention work performed;
7) data concerning possessors of sites.

(3) The rescue information system and the statutes thereof shall be established by a regulation of the minister responsible for the field.

(4) The statutes of the rescue information system shall provide for the procedure for the maintenance of the rescue information system, the detailed composition of data collected in the rescue information system, the persons

[7] https://www.riigiteataja.ee/en/eli/505012018003/consolide

providing data, the deadlines for preserving data and, if necessary, other organisational matters related to the maintenance of the rescue information system.

(5) The controller of the rescue information system shall be the Rescue Board.

RIS components and its related information systems are described in the following drawings.

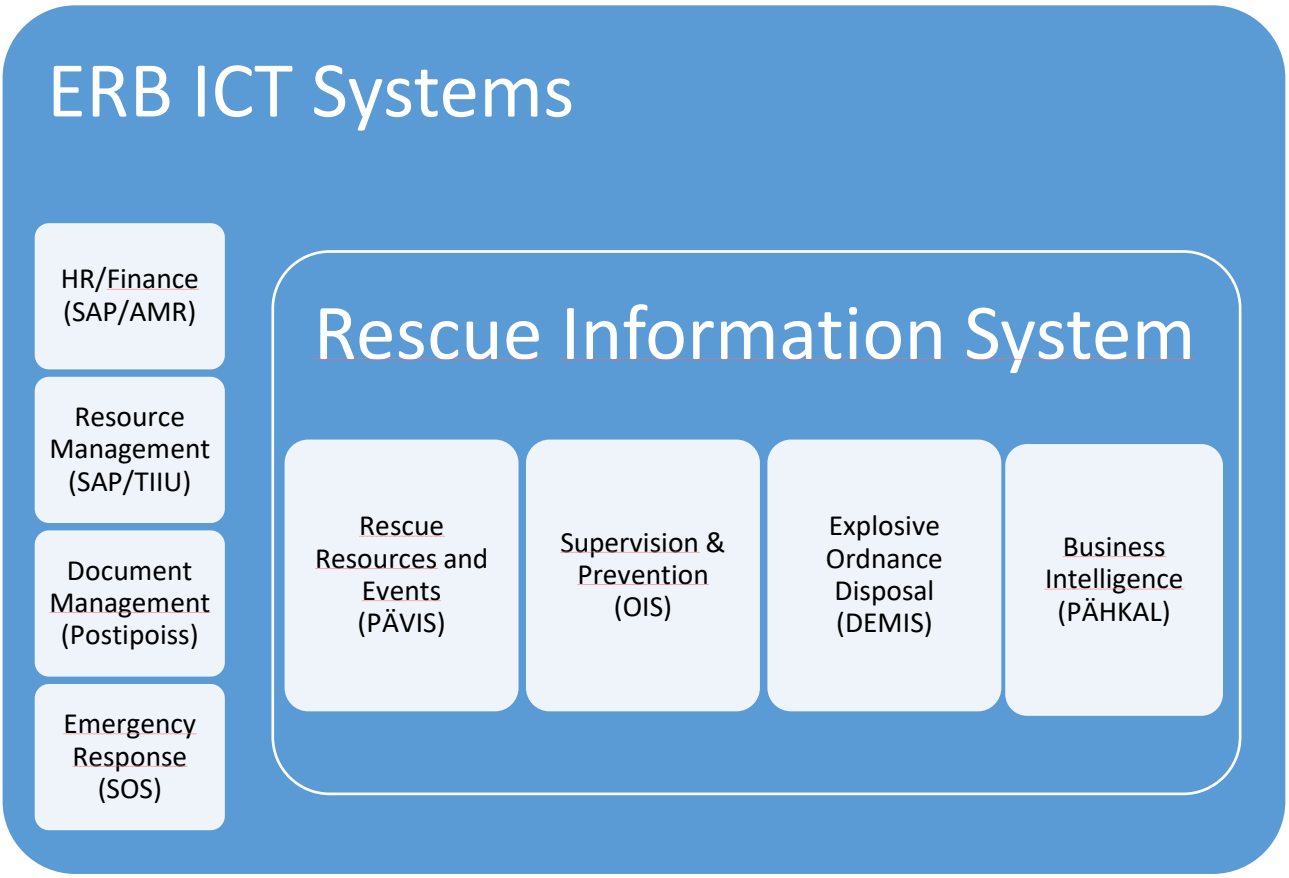
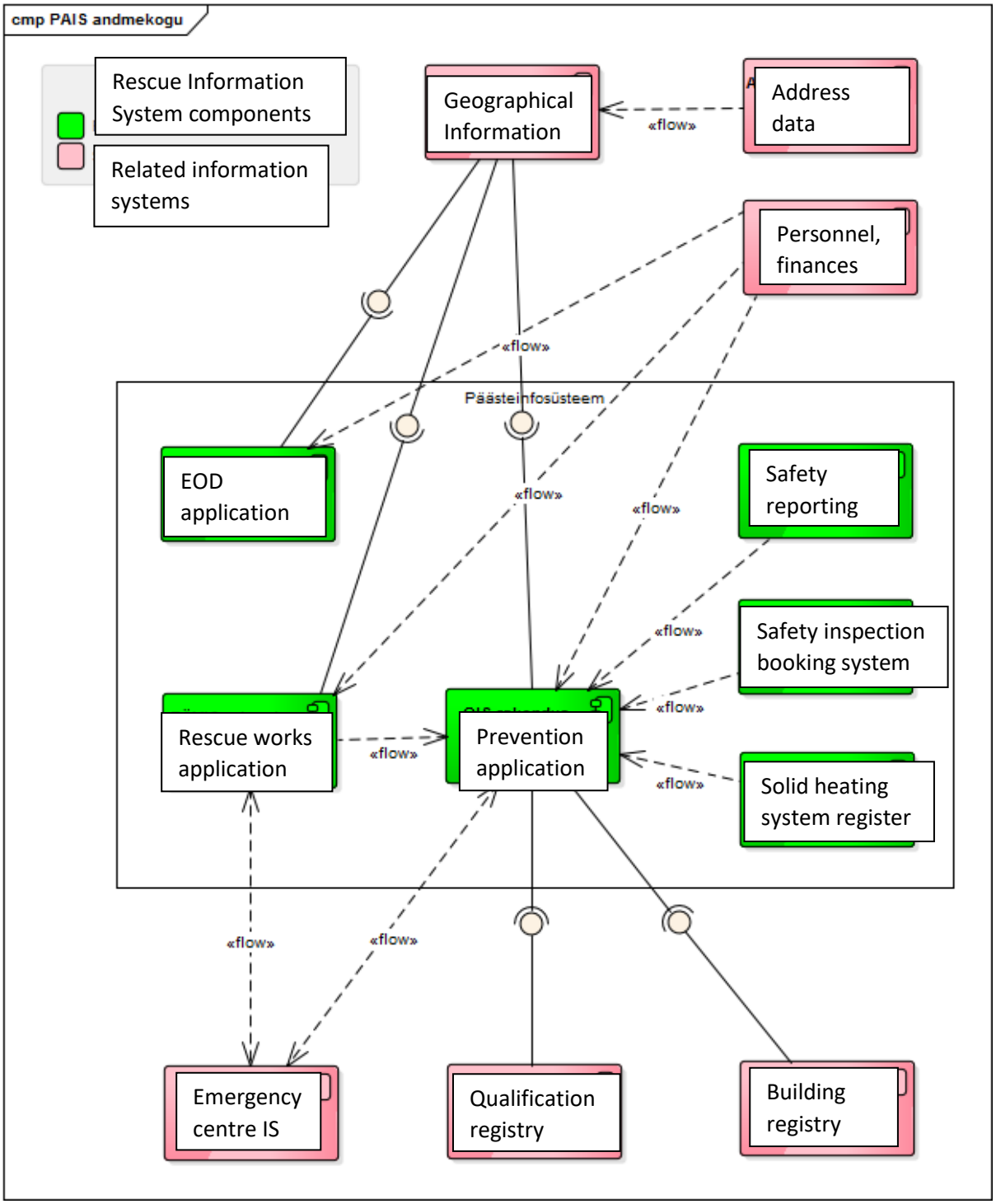


Figure 4. Estonian Rescue Board ICT System



Explanations:

<u>Rescue works application (PÄVIS)</u> - three-layer application that includes business logic, presentation layer and data processing.

- Compilation of rescue personnel and equipment preparedness data. Transmission of data to the emergency centre information system (HKSOS).
- Completing the rescue event with additional data from the scene of the accident and forwarding fire data to fire safety supervision and prevention application (OIS).

The application receives the initial data of the rescue event (incl logistical times) from the HKSOS information system.

Prevention application (OIS) - three-layer application that includes business logic, presentation layer and data processing.

- recording and processing of fire records;
- conducting fire safety supervision activities, including data for different types of buildings, planning of on-site inspections and conducting administrative procedures;
- collecting information related to heating systems;
- managing different types of approval data;
- carrying out activities related to prevention, including planning of prevention projects, data on prevention activities;
- administration of reception times and bookings for safety supervision officers;
- receiving and processing fire safety self-inspection reports;
- handling automatic fire alarm system fire alerts.

Data exchange with automatic fire alarm system operators is done via the interface of the data exchange layer of information systems (*X-Road*), so the OIS application provides x-Road services. In the event of a fire alarm, the application transmits the event information to the HKSOS information system. Fire safety reports, safety supervision times and reservations and receiving heating systems information is arranged as publicly available service. Public services are related to OIS applications through independent web services.

Safety Reporting - A three-layer application that includes business logic, presentation layer and data processing. The application provides a public web service for reporting (tuleohutusaruanne.ee). Data is transmitted to the OIS application.

Booking system - A three-layer application that includes business logic, presentation layer and data processing. The application provides a public web service for the reception of rescue officers for pre-registration. Data is transmitted to the OIS application.

Heating Systems Register - A three-layer application that includes business logic, presentation layer and data processing. The app provides a public web service that allows to transfer information on heating systems. Data is transmitted to the OIS application.

Related components:

Emergency Center Information System (HKSOS) – Information about the rescue personnel and equipment in preparedness is sent from PÄVIS to the HKSOS database. HKSOS sends initial data and logistical times of the event to the rescue works application.

Qualifications Registry - examines the existence and validity of professional certificates.

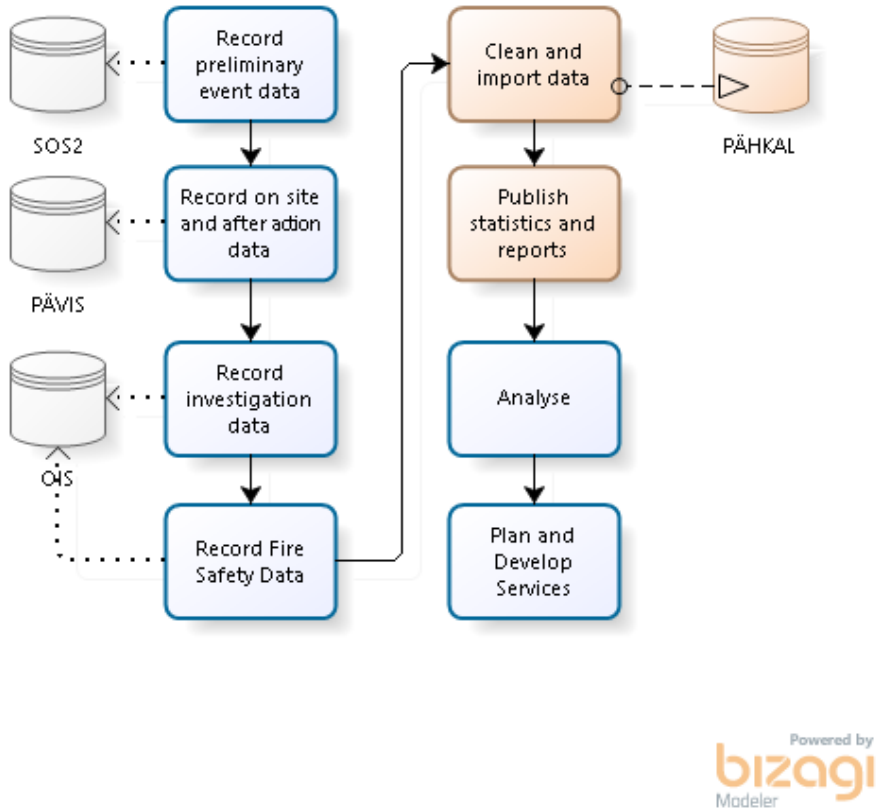
Building Registry - the data stored in the OIS application is linked to the data of the building register.

Geographical Information System (GEOINFO) - the information system contains spatial data from different agencies and organizations. The rescue information system uses its services such as location search etc.

Address Data Register – sends addresses to the GEOINFO Information System, which are used later by RIS.

SAP - the national personnel database. The system provides data of rescue workers and volunteer rescuers.

General description of incident data movement in Rescue Information System is shown in the following drawing:



Rescue Information System has approximately 500 users. Prepared dashboards and reports of data warehouse system PÄHKAL enable users to get up-to-date data for service development, communication and risk forecast.

For strategic steering there is a central department of development, that among other duties is enriching data with information from other distributors (e g social data, building data etc) and providing information to support strategic management decisions. Besides internal ICT-system also Excel, Tableau, ArcGIS and WebFocus are used for data analysis.

The estimated operational cost of the whole system for collecting statistics for performance measurement in 2016 was approximately 270 000 euros. Because of a development project to set up a new data warehouse and analysis environment, relatively high costs for improvement (235 000 euros) and licenses (150 000 euros) should be added to total cost of 2016. The calculation includes costs of data warehouse (PÄHKAL), labor costs of 4 data analysts, licenses (Tableau, Web Focus) and 30% of operational costs of rescue works (PÄVIS) and prevention (OIS) applications.

Finland

Pronto – statistical data system for Finnish Rescue services and applications for Fire prevention.

In Finland, regional rescue service may preserve registry on action for monitoring and developing of rescue services and for the clarifying of an accident. Web-based data system was generated 2000. Emergency Service Collage in Kuopio is taking care of system maintenance and developing.

Data on every operation rescue services called out for whole country since 1996. Data includes incidents, resources and risk areas.

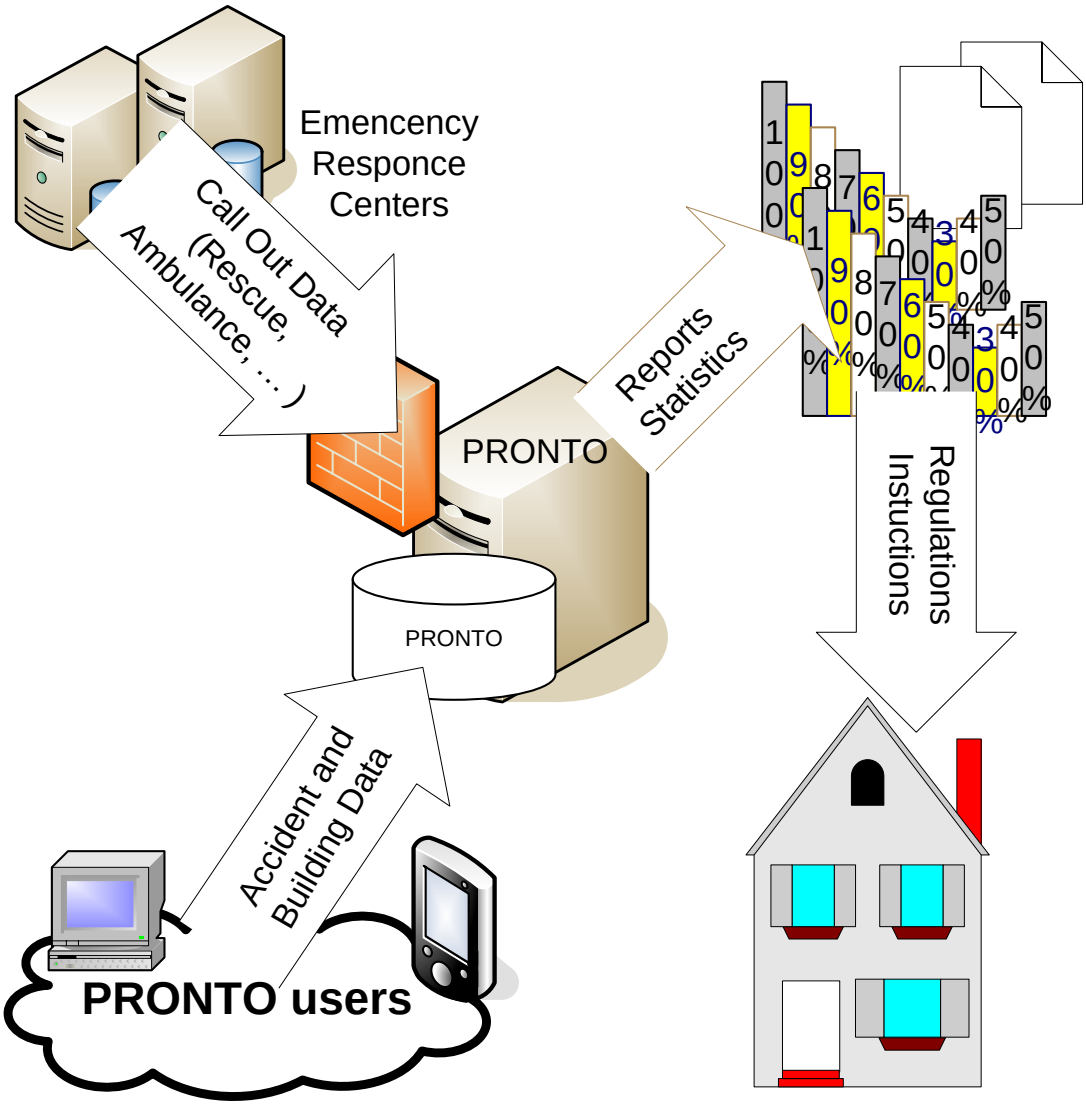


Figure 4. Process overview

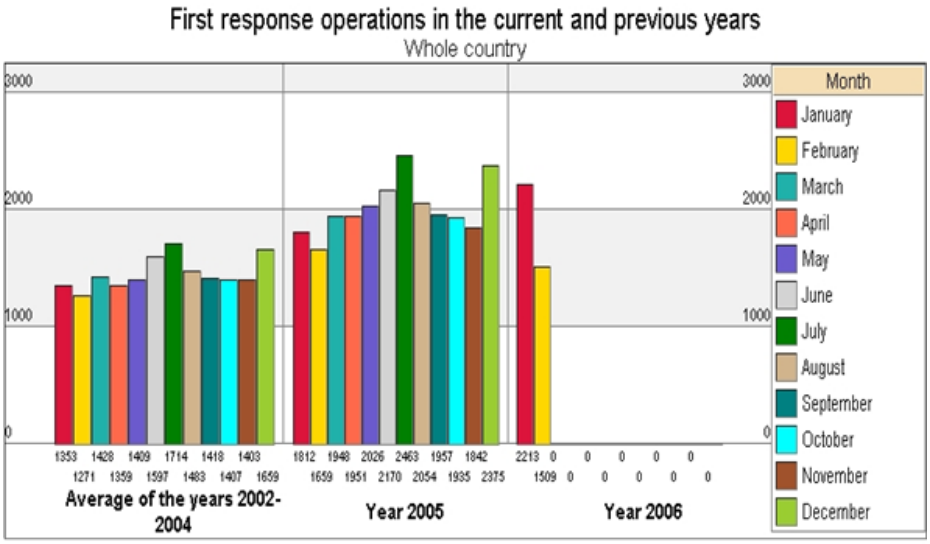
Data collection

Basic data of accident (call out data) is produced by Emergency Response Center. Individual data of accident is added by rescue services. In case of fire, also building information by rescue services.

Call out data	○ Identification data (time of emergency call) ○ Data on emergency call (address and coordinates) ○ Data on alarm (vehicles and status summary)
Data on incidents and actions	○ Drop down menus (additional information by open ended questions) ○ Assessments on ▪ location of ignition and extension of fire ▪ cause of fire ▪ human losses ▪ first extinguishing ▪ emergency services ○ Data on building fires ▪ basic information of building ▪ compartmentation ▪ covering on flammable range ▪ bearing construction ▪ emergency exit ▪ fire safety equipment's ▪ assessment of property losses ▪ remarks on improving fire safety ○ Data on fatal fires ▪ enviroment of incident ▪ addional information about building ▪ course of events (before the incident, during the event) ▪ course of time ▪ data on victims ▪ proposals to improve fire safety

First response operations in the current and previous years
Whole country

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
Average of the years 2002-2004	1353	1271	1428	1359	1409	1597	1714	1483	1418	1407	1403	1659	**17501**
Year 2005	1812	1659	1948	1951	2026	2170	2463	2054	1957	1935	1842	2375	**24192**
Year 2006	2213	1509	0	0	0	0	0	0	0	0	0	0	**3722**



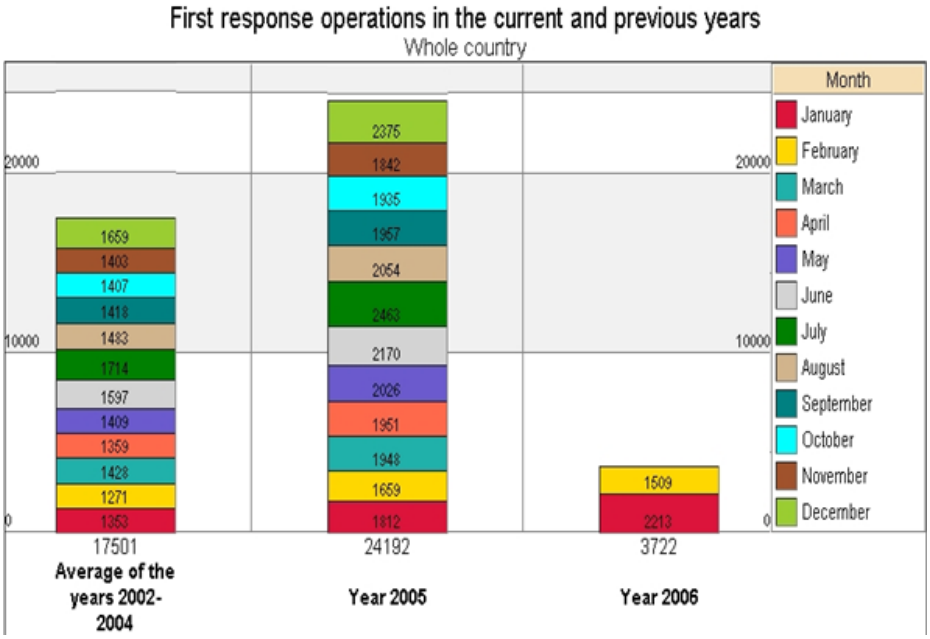


Figure 5. Report model from Pronto

The estimated operational cost of the whole system for collecting statistics for performance measurement in 2017 was approximately 399 932 euros. The calculation includes costs of data warehouse, labor costs of data analysts, licenses and 30% of operational costs.

More information about reports: http://info.smedu.fi/kirjasto/Sarja_D/D3_2018.pdf

6. Risks and limitations in introducing efficient performance measurement system in Latvia

The main challenges in implementation of performance measurement system are:

1. Lack of Managers Commitment
Leadership commitment is crucial for smooth implementation of the system. Leaders must drive the process and make performance management an integral part of the management of the company. Leaders should contribute in setting goals and performance indicators and building monitoring and rewarding systems.

2. Lack of Employee Engagement
All levels of management should be involved in developing performance measurement system for clear understanding and commitment. The principles of change management should be considered.

3. Understanding the usability of the system
There should be common understanding on usability of performance measurement system. Information used in steering the development, is not always "black and white", there are often external factors that we are not aware of. Using performance information in rewarding system has risks of uncertainty and inequality, that must be considered.

4. Sophisticated implementation
Implementation of performance management system in a large-scale organization requires good project management. It is important to conduct detailed analysis of key processes and be prepared for process remodelling (incl changes in legislation).

5. ICT-dependency
For ensuring necessary data flow and data quality for performance measurement and steering development in an efficient way, the amount of manual labour hours should be minimised.

7. Indicator's and detailed description of measurement

Previously described models will help us to define indicators based on goals. It is not always possible or wise to measure everything that needs to be measured. Sometimes the data is not available; sometimes it is extremely expensive to process the data. Therefore, following steps should be taken to form the set of indicators.

a) What needs to be measured?
b) What can be measured?
c) Is the data available?
d) Which indicators are the best?/which indicators express the desired impact the most?
e) What are the desired levels of achievement/ambitions?
f) How can we integrate indicators to data gathering, planning and reporting processes?

For common understanding, clear responsibilities and for ensuring the sustainability of performance measurement system, it is recommended to use indicator cards in the following structure:

1. Title of the indicator
2. Relation to the strategy
3. Measurement method
4. Definition
5. Process of input, motivation for using the indicator
6. Data level (region, county etc.)
7. Data collection process
8. Data quality assurance
9. Owner of data

8. How to proceed

The observations and recommendations made by the expert group are based primarily on the materials they have received and the information gathered during the workshops. In order to ensure real efficiency in organization, it is important to define the rescue service ambition through the vision and goal set. Next step is to carry out an organizational self-analysis to identify the actual current situation and the ability to achieve the goal, taking into account the available human resources and technical base.

Achieving the goal, or raising the effectiveness, can be evaluated through measurement system. Key activity of setting the indicator is to evaluate what information already exists, what is collected and why, what it shows, and whether and what conclusions can be done according the information. When implementing the recommended indicators, it is important not to implement immediately and all at once, but to start with those that can be implemented easily using the collected data and which have the greatest impact on the achievement of the goal. It has to be taken into account that the indicators can be changed if needed or it does not serve the purpose any more. Also new indicators can be implemented to evaluate the developments or activities different areas. To implement the measurement system the main precondition is that the organization has the internal agreement and readiness to make changes and developments to achieve the main goal.

In conclusion, the activities following the project should be:

1. Setting a vision and goal of the rescue services and have an agreement about it in societal and political level

2. An analysis of the current situation of the rescue service has to be carried out to describe the possibilities for achieving the goal

3. Analysis of the data available at the moment - what information and why is collected and what should be collected and why

4. Which indicators show the most effective way to reach the goal, whether there are enough data to implement these indicators

5. Annual analysis shoud be carried out to assess the effectiveness of the rescue services and the efficiency of the indicators, if needed new indicators should be developed.

General recommendations to be implemented in SFRS are:

1. ICT system recommendations

The expert group considers important to stress the need of linking ICT-systems of SFRS, police and other involved agencies. The most important objectives of linking are: 1) information about risks 2) information about causes 3) avoiding duplication of data collection

2. Strengthening co-operation

In order to achieve goals and have greater impact in society, it is crucial to describe processes in which other agencies and actors play important roles. The cooperation should be pre-planned, targeted and of mutual interest. In particular, the cooperation between police, ambulance, social workers and fire services in preventive activities and risk mapping should be one of the priorities.

For example, to find the right target groups, that have higher risk of fires, the partners should have the knowledge of most important risk aspects. The checklist could include:

- Absence of functional smoke detector

- Dangerous situation of heating device
- Dangerous situation of electricity systems
- Smoking indoors (e-cigarettes excluded)
- Alcohol abuse
- Hoarding
- Lone elderly people (65+)

It is also important to measure the quality of cooperation - partners satisfaction and the real impact of cooperation activities.

3. Legislative recommendations

The expert group suggestion is to assess whether stipulating service levels (eg response time) in legislative acts could have unnecessary restraints and undesired impacts. One of the preconditions (using the example of response time) could be the publication of realistic response times on the Latvian map. This enables to achieve the conformity with public expectations. The service levels should still be agreed, targeted and publicly available, but instead of legislation we suggest using other policy instruments (eg development plans).

The other suggestion is to pay more attention to the regulations of data collection and exchange for prevention and supervision activities. The cooperation between agencies is important and effective, but rules of data protection must be considered.