EENA Operations Document

Managing change

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1 Executive Summary

Change is a fact of life. Without change there wouldn't be improvement. New technologies are introduced, reforms take place, and the way people communicate evolves.

Public safety is not immune to this process, especially with the budgetary changes and organisational reforms. NG112 is knocking at the door, because technology improves faster and faster. In a period like this, the need to manage the change couldn't be higher: Public safety organisations need to make a difference between what is feasible and what is not. Between what is a "nice to have" and a "must have", between what is acceptable and what is satisfying.

This document tries to undergo all the aspects of managing change in the Public Sector environment with suggestions and considerations for those who are approaching the reform of 112 as a unique emergency number, as well as for those who are changing the way they implement 112 or the ones who are re-organising their emergency services.

2 Acronyms and definitions

Acronym	Description
EMS	Emergency Medical Services
ERO	Emergency Response Organisation
ES	Emergency Services
FRS	Fire and Rescue Services
MS	Member States (European Union)
POL	Police Forces
PSAP	Public Safety Answering Point
SOP	Standard Operating Procedure

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3 Drivers for the change

Every part of our societies sooner or later needs to undergo a process of change. On a global scale, there are several factors that drive changes in different aspects of our society. Handling emergencies is surely one of them. There are key elements that can be identified as "drivers". Here below we list some of the most significative.

1) **Cost saving:** Everywhere around the world, the economy is changing and public trust is under a constant process of reform. Cost saving is one of the biggest drivers for changing existing services and infrastructures, trying to maximize the existent, while introducing elements of innovation and downscaling the pillars that represent the system we want to change. (This driver mostly impacts on aspects described in Chapters 5.2, 5.4, 5.5)
2) **Events that question the current system:** Many countries, in their recent history, have faced emergencies that went out of control or were perceived as such by the citizens. Being them caused by nature (huge floods, fires or earthquakes) or by men (terrorist attacks, explosions, shipwrecks, toxic leaks or spills), the natural reaction, after the crisis was resolved, was always to ask ourselves if we had the appropriate way to handle what just happened. This kind of driver is what makes people consider their SOPs at many levels, in order to include unexpected phenomena and review the daily usage of resources. (This driver mostly impacts on aspects described in Chapters 5.1, 5.2, 5.5)
3) **Improving a well-known underperforming situation:** An institution or system may become too old to survive the society's changes, such as demographical increase, new technologies arising and political changes. A situation like this may be connected to requests from citizens towards the existing services provided, generating a strong driver for decision makers in certain periods that lead to a "natural" improvement of the existing, in favour of something new and more performing. (This driver mostly impacts on aspects described in Chapters 5.1, 5.2, 5.5).
4) **Legislation:** As mentioned in the Introduction to this document, legislation changes lead countries to the decision of changing the way they manage emergencies to be compliant with the latest technologies, processes and SOPs. (This driver may impact on basically one or more aspects described in Chapter 5, if not on all of them)

4 Theory of change

We would like to mention in this chapter, the pillars of the Theory of Change[1] (TOC). TOC can be applied to every environment, but in our case, we will refer to it in the following chapters, to build the Change Process for emergency services (ES).

TOC maps out any initiative through 6 stages:

1. Identifying long-term goals
2. Backwards mapping and connecting the preconditions or requirements necessary to achieve that goal and explaining why these preconditions are necessary and sufficient.
3. Identifying your basic assumptions about the context.
4. Identifying the interventions that your initiative will perform to create your desired change.
5. Developing indicators to measure your outcomes to assess the performance of your initiative.
6. Writing a narrative to explain the logic of your initiative.

The goal of these steps is to create a so-called "pathway of change" (see Chapter 6 for an example of it) that tries to define all the steps and actions to be taken in order for the Change to take place appropriately. Participants in the creation of a pathway are encouraged to present all their assumptions that will help defining the boundaries for the process. Usually the contributions are qualified as follows:

a. Assertions about the connections between long term, intermediate and early outcomes on the map;
b. Substantiation for the claim that all of the important preconditions for success have been identified;
c. Justifications supporting the links between program activities and the outcomes they are expected to produce;
d. Contextual or environmental factors that will support or hinder progress toward the realization of outcomes.

We would like to stress the importance given by the TOC to the definition of goals, in the long term and at intermediate steps. By defining clear and achievable goals for the team, the change process will succeed in bringing the added value expected when the Drivers for the Change were initially introduced.

[1] For more information, please refer to this website: http://www.theoryofchange.org/

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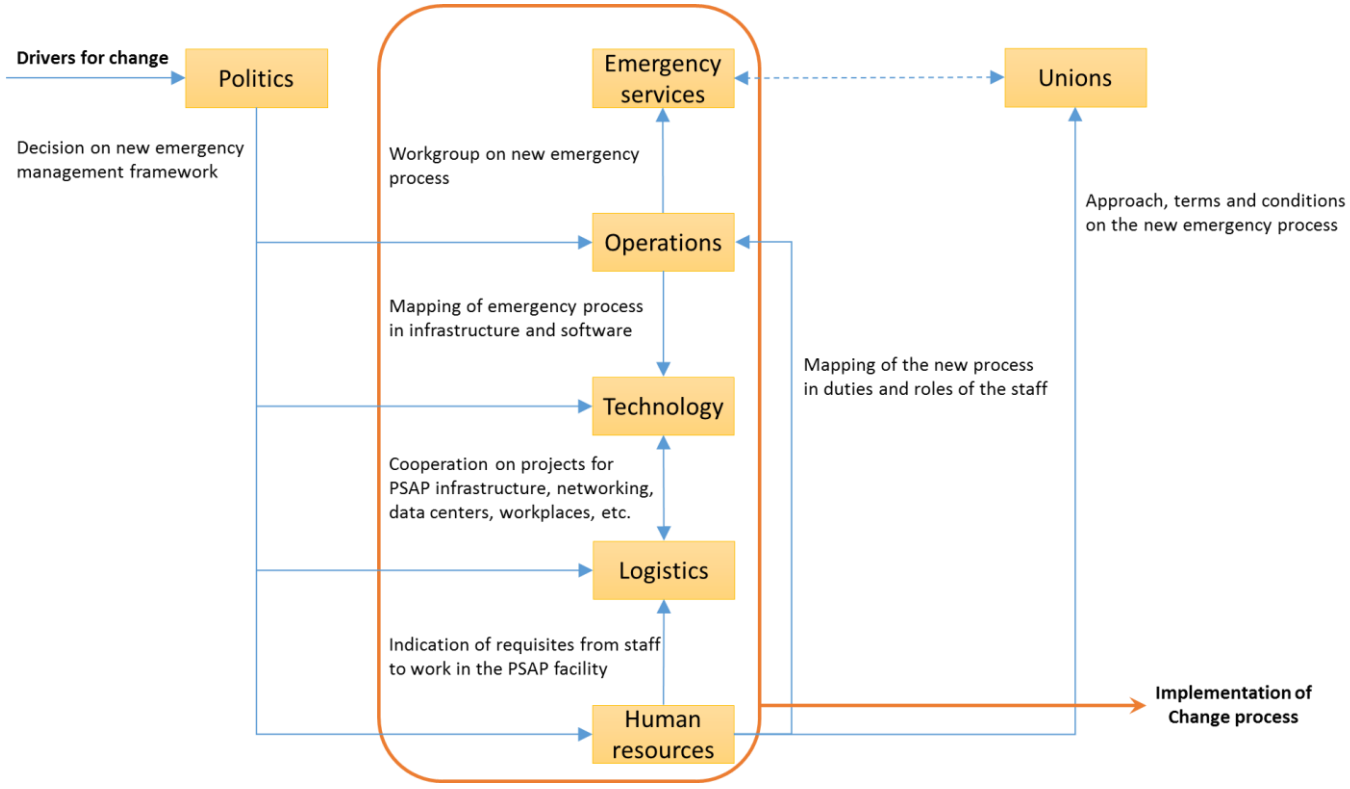
5 Impacts of the change

This chapter goes in detail of what domains of an emergency management service could be impacted by the choice of introducing a change process. In the following sections we will use the introduction of the 112 emergency number as example for change.

What is common to all these domains is that coordination is of the essence. Different domains interact with each other, and changes in one of them may have consequences on the others. That's why they should not be considered as sealed compartments, but rather as an interactive and coordinated work.

This schema represents the interconnections and relationships between the domains described in Chapter 5. We tried to propose a high level "pathway" from the Change Drivers, to the implementation of the Change Process, highlighting the stakeholders for all the parts of the process and their main tasks for all of them.



5.1 Politics

SUMMARY: At this stage, political decisions are taken, high level organisation decisions are taken, the change committee is created, the operational consequences are taken into account, and the overall change process plan is discussed, with goals and intermediate steps.

Once the political decision to introduce the 112 number has been taken, the different options of high level organisation and responsibilities should be taken into consideration.

112 as a service needs to be managed by a governmental body or bodies, defined inside each MS. There are basically three choices to make in this case, that can be then more detailed.

- Brand new 112 Agency/Body created by a Ministry (usually Ministries of Interior, Defence, Health);
- Existing Agency/Body that takes responsibilities also of 112 services (usually Police, Fire and Rescue Services, Emergency Medical Services, etc.);
- Consolidation of different existing agencies into one.

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These categories can be also split to manage wide territories or countries. For example, local 112 Agencies or regional FRS may be both acceptable managing bodies, if they possess a knowledge of the territory or region that can benefit the implementation of 112. It is important to note that heavy territorial segmentation could decrease efficiency and increase costs, and therefore consolidation processes are a common practice in many countries nowadays.

The decision has to be taken depending on historical, social and cultural background of the country where the change is taking place and therefore, it is different from country to country.

The most important thing to consider in all cases is, anyway, the creation of a management team that is aware of emergency processes and can establish profitable relationships with other Public Safety agencies. Coordination is the essence of change especially in the 112 process introduction, where 112 PSAP will route emergency calls to other EROs, according to pre-determined policies and procedures. More about this topic is discussed in Chapter 5.2

At this stage, the General Manager of the Change process should be appointed. This should be the person that sees the new policies decided at a political level to be applied in practice, by coordinating all the domains that are impacted by the change process.

5.2 Operations

SUMMARY: The business process is analysed, proposals for changes are made and discussions with HR managers and technical managers are initiated.

Introducing new policies for emergency management may have a great impact on the existing Public Safety agencies, especially because responsibilities may be redistributed.

A 112 PSAP will be in charge of answering all emergency calls from a given territory, which means that other agencies may see their duties concentrating more on a detailed qualification of the (previously filtered) call, as well as dispatching resources.

A number of variants can be introduced at this stage:

- Some 112 PSAPs only forward the "contact form" including location data and qualification of the emergency to 2nd levels (e.g. Madrid, Spain)
- Some 112 PSAPs forward the "contact form" along with the call to 2nd levels (e.g. Milan, Italy)
- Some 112 PSAPs may have their functions extended up to dispatching powers (e.g. Finland)

Rules of engagement of 2nd level PSAPs should be improved and modelled in consideration of the national rules of engagement between public safety resources, as well as from Best Practices adopted by European countries.

The "contact form" itself is crucial when interoperating between PSAPs. It is the core of a 112 PSAP activity. EU rules for 112 PSAP include the automatic collection of location information and initial qualification of the call to be handled by the most appropriate 2nd level PSAP (EMS, FRS, Law enforcement, technical emergency) in the correct area of jurisdiction.

The rules for multi-agency cooperation need also to be clearly addressed, with considerations about command, coordination, communication, etc.

It is vital that good relationships are in place between the different forces that will share the process reform and that the coordinators know all needs from existing processes that cannot change for a reason or another (e.g. competence levels or privacy aspects). The key to succeed in operations change is being able to fit the decided new policies and procedures so that they are accepted by the emergency professionals because they feel an improvement in their current way of working.

The person in charge of this operation has a crucial role and needs to know or learn the different processes currently in place in a given County/Region that wants to implement the change. The Operations manager should be coordinating the workgroup that defines the guidelines of the new emergency management process, keeping in mind what is the plan originally defined at a legislation level and proposed by the General Manager in charge of implementing the change.

5.3 Logistics

SUMMARY: Infrastructures and projects for a new or renovated PSAP facility are screened. A discussion with HR managers and technical managers is established to map their exigence.

Several models of interoperability among PSAPs exist and mapping these models in an appropriate physical environment is important. Cooperation among different types of professionals needs to be taken into account, as you create relationships among the agencies.

New 112 facilities should consider two possible variants:

- Centralized facility, where 1st and 2nd level PSAPs are all present;
- Distributed facilities, where 112 and other ES are spread on the territory, but they start interoperating in a harmonized way.

Because logistics depend much on budget allocation and availability, this choice between a centralized facility or a distributed one could depend much on this topic. Facility costs may raise when all the parameters of security, disaster prevention and privacy are to be met.

When deciding the model, besides budget, some other important parameters should be taken into account:

- Some staffing may need special requirements that others will not (FRS vs. EMS vs. Police vs. civilian call takers)
- 2nd level PSAPs could consider this step for a process of consolidation, while new 112 facilities are created.

Some hybrid models may be considered as well, where one or more 2nd level PSAPs may join together with the newly created 112 PSAP, while other 2nd levels may retain their existing premises.

Once a 112 PSAP is established, it should respond to a set of parameters:

- Security of access for authorized people only
- Security of data (privacy)
- Security of data (against IT attacks)
- Communication systems redundancy
- Overall high availability and business continuity ("five nines" preferred – 99,999% uptime)
- Disaster recovery functions for both the data center part and the operators workstations

Never forget that 112 PSAPs are the first contact points for citizens in case of emergencies, also during large-scale events.

Distributed 2nd levels may use a policy of call fall-back and act as 1st levels as well, if for some reason the 112 PSAP is unavailable. That becomes more critical when all PSAPs are concentrated in the same facility and it becomes physically unreachable, or its connections are lost. In overall distributed PSAP architectures (e.g. Finland), each node may act as backup or fall-back for the rest.

The logistic change managers have to consider very well the needs of the system as a whole. Not mentioning some usual aspects (e.g. conditioning of server rooms, ergonomics of working places, security and monitoring of rooms), it is important to focus on those aspects that are common to other domains as well. They need to address which operations will be run in the facility (regardless if it is new or already in use) and what different staff they will require. Finally, they have to consider the scheduling of the activities needed in the facility and the personnel shift, in order to maximize the use of available or budgeted resources for a correct dimensioning of the facilities.

5.4 HR

SUMMARY: The impact on contracts, time shifts, commodities are analysed. Recruitment is put in place where necessary and training is discussed with the operations manager.

Whenever a change is planned, PSAP staff is one of the key factors to consider, which may sometimes become also one of the key problems due to staff resistance to change.
One of the key aspects during a change process is a good information and communication strategy between all stakeholders (top-down, bottom-up and horizontal), which can help overcome the normal resistance to change.
According to what has been said in the previous chapters, existing staff may see their daily work change dramatically. Even if we won't go in the detail of rescheduling shifts and similar, we will concentrate on macro changes that may apply in these situations, such as:

- People may need to relocate from an old structure to a new one. This needs to be carefully addressed, especially if the new structure is located far away from the old one, to avoid shifts problems and turnover due to complications in relocating.
- People may need to change the process they use every day, to adapt to the new 112 modus operandi. For this reason, the process needs to be clear way before the new activity begins, and all stakeholders need to be trained not just in the way they operate a software or technology, but also about the meaning of the new process being implemented. It is important to establish specific academic paths for the preparation of PSAP operators, and the duration may change according to the kind of professionalism required (from weeks to several months).
- People may need to share their working spaces with others. This is the case when creating an aggregated PSAP that involves professionals of different kinds (e.g. PSAP for 112 calls, EMS dispatching, FRS dispatching, Police dispatching). All professionals have their own needs carried along from the previous working experiences, as well as practical needs (e.g. wardrobe units to change clothes). Addressing this topic during the change is important to create a proper working environment and should be dealt in early stages of the change process, because sometimes replicating "old habits" may not be feasible.
- People may belong to Unions that should be involved in the change process. Making sure that all interested organisms cooperate in the change process is important and quite often helps in reducing the resistance to the change.

Despite all precautions, implementing a new process may involve employee turnover even at high rates, and organisations managing the change need to be proactive in estimating future workforce needs. The person in charge of the HR selection is asked to keep the relationships with the different professional representatives (if any) to make sure that the process of introducing changes in the way professionals work is seamless. Hiring new staff is an important task, and defining the requirements for the new team is crucial too, but coordinating many different players that will need to cooperate to run the new process smoothly needs probably to be strongly addressed.

5.5 Technical

SUMMARY: New software applications are screened, networking and telecommunications requirements are analysed, security parameters are defined.

During a change process, technology plays a big part because many aspects, such as new processes and applications, and the confidence and performance of operators depend closely on technological choices. Technology does not need only to be performing and secure, but also put operators and managers to accomplish their own activities properly. This chapter will be divided into smaller parts, addressing various details connected to technological changes. We will also try not to address details such as choosing blade server technologies vs. monolithic servers or similar.

Just before defining the particular aspects of technology that should be addressed, it is important to state that the person in charge of the technological change is one of the most relevant in the process, as technology plays a crucial role in an emergency management system. End-to-end reliability of the systems, ease of use and process implementation, they all depend on the choices made for the technology to be implemented. New volumes of emergency calls, number of concurrent cases to be handled, details of the incidents that are managed and the way they reflect on the process, all depend on technology. Also, it is important to look at future developments, in order to place smart investments, as probably funds will be mostly drained during the change activity.

5.5.1 Control room infrastructures

Referring to chapters 5.2 and 5.3, the choices of the organisation of a 112 PSAP can influence the infrastructural choices. Taking advantage of a changed territorial distribution, PSAPs may want to implement mechanics that were not available before or were just not possible.

A new PSAP that concentrates all 1st & 2nd level operators in one structure may want to implement disaster recovery features, distributing its backend (servers, storage, PBX, etc.) on the territory. For the same reason, several PSAPs coming to work together under a 112 model, may take advantage of each other's existing territorial distribution for technological backup.

Both cases represent good examples of changing and innovating technological infrastructures, although parameters and planning may change from country to country, or even locally from region to region. Several parameters must be taken in consideration when planning an efficacious technological infrastructure change, such as environmental considerations (e.g. minimum distances between data centres for disaster recovery) or existing agreements (e.g. can IT managers from a PSAP support/cooperate with IT managers from another PSAP for infrastructure backup?).

Connectivity is another aspect of infrastructure that is addressed by a change process, especially for those PSAPs whose connectivity is limited or non-existent. Once again, several parameters apply when taking in consideration a change in connectivity policies, for example privacy issues, data protection or security. PSAPs should anyway consider the advancement of new technologies, based on mobile applications, high bandwidth consuming media and all the discussions about Next Generation emergency communication solutions, that refer to modern telecommunications infrastructures. The topics of "security vs. information access" need to be addressed in a change process, taking in consideration the recent improvements in security and privacy protection.

5.5.2 Software platforms

As said before, technological choices for a new emergency system make the difference between a successful project and one that is not. Once again, we are not discussing the implementation choices: which database is better, whether it is necessary or not to have a fault tolerant application, etc. These details are left to the sensitivity of the IT managers. What is important to take in consideration in a change management activity is that the new software system is compliant with the required process of emergency management chosen before technology.

The other important factor that needs to be addressed during the change is interoperability. According to the decisions in terms of process and organisation models, the new 112 PSAP could be sharing or not be sharing the technology with the rest of the 2nd level emergency services. In those cases, the new system will need to be interoperable with existing ones which might not be subject to the change. Or there might be cases when more technologies are working together. In these conditions, Operations will need to consider interoperability between systems and define beforehand the rules to implement it.

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6 EENA Recommendations

Besides the pathway shown in Chapter 5, EENA recommends a few important steps to be taken in consideration.

- **Operations** will need to define the new emergency process. In doing that, their duty will be to keep relationships with many domains, including:
  - technology, to map the process to what might become a software interface and/or a system architecture.
  - human resources, because they will need to share the details of the new process with those who will need to start new recruitment or who are responsible to update the existing staff about their new "rules of engagement".
  - ES (Police, EMS, FRS, etc.) that will have to share and help defining the new process. That's why the idea of "Workgroup" is the most suitable. Every agency needs to participate in particular to this definition, because operations will affect everyone, regardless of the model chosen to run 112 services.
- **Technology** has the double face of cooperating both in a "soft way" with the Operations, to map their requests (and possibly work on a proper RFP, if needed to ask the right questions for the software part), and on the "hard way", to understand the need of the Logistics when coming to the definition of the PSAP facility, that hosts operators, infrastructure and networking, and analyse the need to have local or remote servers and what impact this will have on the technological choice.
- **Logistics** will need to address the PSAP facility and services available. Its work will lead or at least influence the choices of the infrastructure and technology domain (for the hardware part at least), in order to properly equip the PSAP, as well as being led or influenced by the type of resources that need to work together in the PSAP.
- **Human resources** have one of the most critical tasks, because they need to make sure that the PSAP works properly, according to what was decided when the change was decided. Relationship with operators and agencies as well as with Unions (where existing) need to be taken care of, to avoid slowdowns in the change process.

Stakeholders	Actions
Politics (Ministries and/or Regional governments)	Issue the request to initiate the change process and give the overall parameters of what should be achieved.
Emergency Services (112 Agencies, other Emergency Agencies)	Coordinate the change process, defining milestones and make sure that other stakeholders are harmonized.
Operations (Emergency managers and experts)	Mapping of the existing emergency procedures in order to find and implement the new ones after the change.
Technology (IT managers)	Define the technical infrastructure that supports the emergency procedures defined by the Operations on all means (connectivity, resilience, performance, etc.)
Logistics (Control Room managers)	Determine the most appropriate structures to host the PSAP and the required technological components and/or satisfies needs of a Call Taker / Dispatcher activity.
Human Resources (HR departments)	Coordinate the recruiting, based on a agreed list of requirements with the Emergency managers
(Unions)	To be consulted when introducing a new role in the organisation and/or agree on the new job structure.

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7 Real examples

This chapter includes some real examples of changing the way an emergency process is managed. They are all success cases that should be taken into account when addressing a similar topic and proof that change for better is possible, if all steps are followed and considered.

7.1 Italy (AREU)

Creation of the first 112 PSAPS in Italy[2]

Some figures:

Population:	10 million (+ visitors)
Area covered:	All Lombardy region
Regional structure:	12 provinces with a very diverse landscape: mountains, lakes, metropolitan areas, hills, plains.

Drivers for the change:

- Request from the EU commission to establish the 112 European Emergency Number in Italy
- Consolidation of the EMS 2nd level PSAPs for a cost saving activity

Starting situation vs. End situation:

	Starting situation (2010)	**End situation (2015)**
Situation within the government structures:	No European 112 service in place. Four different emergency agencies, all under different ministries (health, defense, interior), each of them with their own emergency number	12 provinces, 10 million people covered with 112, that serves all agencies Consolidation of 12 EMS 2nd level PSAPs into 4
PSAP model:	Separated PSAPs, divided by functional and territorial operations	Stage 1 + Stage 2 PSAPs. 3 1st level PSAPs that cover approximately 3.5 million people each.
EROs integrated	No integration	POL, FRS, EMS, Carabinieri, Local Police
Nº of PSAPs:	More than 50	Less than 30

[2] See EENA's document: http://www.eena.org/uploads/gallery/files/operations_docs/2014_10_24_112_AREU_v1.pdf

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Most relevant milestones

2010: Establishment of the 1st 112 PSAP in Varese, Italy, under direct mandate of the Ministry of interior to AREU.
2013: Creation of the 112 PSAP in Milan
2014: Beginning of consolidation for the 2nd level EMS PSAPs
2014: Development of the official 112 app for smartphone for automatic caller location
2015: Creation of the 112 PSAP in Brescia – complete coverage of the Lombardy region with 112
2015: End of the consolidation of EMS PSAPs. From the initial 12 EMS PSAPs, now Lombardy has only 4
2015: Outstanding Emergency Call Center award at 112 Awards Ceremony during EENA conference
2015-2016: AREU's model used for the creation of other 112 PSAPs in Italy (Trento, Rome, Sicily, etc.) after the Reform of Public Administration by the Ministry of Interior.

The Reform of Public Administration in Italy, issued on July 16th 2015, among many other things, defined that 112 will be only Emergency Number for all kinds of emergency, substituting the previous existing ones. Italian regions will need to establish regional 112 PSAPs, according to their size and population, following the process implemented in Varese, Milan and Brescia by AREU.

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7.2 Finland

FINLAND'S CONSOLIDATION OF REGIONAL PSAPS[3]

Some figures:

Population:	5,5 million (+ visitors)
Area covered:	All Finland (except Åland Islands)
Regional structure:	19 regions (governed by regional councils), 70 sub-regions and 320 municipalities At supra-regional level there are 6 Regional State Administrative Agencies (+ the State Department of Åland)

Drivers for the change:

- Nearly 10 years of operations (1996 – 2006)
- Need for uniformity of models of operations; harmonization, increased operational efficiency and productivity; improve the ability to manage rush hours and crises
- New Government Productivity Program
- Stakeholders expecting new services linked to new technologies.

Starting situation vs. End situation:

	Starting situation (2007)	**End situation (2015)**
Situation within the government structures:	ERC is under the Ministry of Interior. Shared responsibility with ministry of Social Affairs and Health.	ERC is under the Ministry of Interior. Shared responsibility with ministry of Social Affairs and Health.
PSAP model:	Stage 1 + Stage 2 with separated regional operation	Stage 1 + Stage 2 with one virtual PSAP distributed in 6 locations
EROs integrated	POL, FRS, EMS	POL, FRS, EMS
Nº of PSAPs:	19	6
Real-state costs	5,14 M€	3,77 M€
Nº of staff:	Operative staff: 609 Administrative staff: 136	Operative staff: 549 Administrative staff: 115
Relevant call/incident figures:	Answering time >10s: %77 Answering time >30s: %89	Answering time >10s: %95 Answering time >30s: %98

[3] See EENA's document:
http://www.eena.org/download.asp?item_id=135

Most relevant milestones:

1996-2001: Emergency response centre trials in 4 areas.
2001-2006: ERC Administration creation decree in 2001; 15 PSAPs in operations by 2006.
2006-2009: 2007 Government and 2008 Parliament reports and 2009 decision on reform.
2010:

- Government decides to create 6 ERC regions, and defines targeted merger schedule. Launch of strategic change and development project.
- Launch of competitive bidding for new IT system.
- Start of change discussions with staff, and definition of staff strategy.

2011:

- New Act on Emergency Response Centre Operations and the Government Decree on the Operation of Emergency Response Centres
- New operating rules and organisation confirmed; ERCA Legal Compliance Unit established
- Delivery contract signed for new ERC IT system
- 1st new unified ERC begins operations.
- First new regional cooperation groups and branch-specific development groups established in ERCs' collaboration regions
- Closure of strategic change and development project and transfer of tasks to ERCA

2012:

- 2nd unified ERC is launched.
- Internal operations control at ERCA developed and unified among various departments
- Name chosen for the new ERC IT system: ERICA.
- Fixed-term change management unit set up at ERCA to steer and coordinate overall planning of structural change

2013:

- 3rd unified ERC launched in full operations, and 4th in partial operations.
- Risk assessment efforts unified.
- New regional cooperation groups and branch-specific development groups n operation in all ERC collaboration regions
- End of work of working group discussing future operating model and structure for administrative and support functions at ERCA

2014:

- 4th and 5th unified ERCs launched in full operations.
- Updates on risk assessment instructions delivered by social services, EMS and police
- Launch of Smart Locator app

2015:

- End of structural renewal of ERCA.
- Start of testing and training of ERICA ICT systems.
- Start of planning of other issues related to the ERC work as a network
- Production of national risk assessment guidelines and operational instructions
- Work on ERCA´s new strategy

Some lessons learnt:

Do's:	• Consolidate the strategic vision of all security authorities. A nationwide renewal requires strong guidance and leadership. • Launch separate projects with full-time personnel for executing different areas of the renewal. Tasks, communication and co-operation between the basic organisation and projects have to be clearly defined. • Consider the huge input in the training as a critical factor for success. Invest in development of skills and guidelines.

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		• Have a well-coordinated and effective staff policy. Secure employee competence and be proactive in estimating the future need of workforce • Plan publicity and communications actions.	
	Don'ts:	• Don't ignore the heavy burden of the structural reform on employees. • Don't underestimate the need for additional resources to enable change • Don't underestimate the needs for active communication about the change at all levels • Don't design PSAPs based on assumptions (use knowledge instead) • Don't fight back criticism (it can be decreased with facts)	

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7.3 Poland

POLAND'S NEW STAGE 1 STRUCTURE

Some figures:

Population:	~39 million (+ visitors)
Area covered:	All Poland
Regional structure:	16 Voivodships (regions governed by regional councils), 379 districts and 2478 communities

Drivers for the change:

- New Ministry of Administration & Digitization
- 112 calls answered by Police or FRS, with more than 80% hoax calls

Starting situation vs. End situation:

	Starting situation (2010)	**End situation (2013-2014)**	**Future (2015)**
Situation within the government structures:	Ministry of Internal Affairs and Administration (responsibility shared with regional governments)	Ministry of Ministry of Administration & Digitization (responsibility shared with regional governments)	
PSAP model:	997 (Police), 998 (FRS) and 999 (EMS) PSAPs only. 112 calls received by Police or FRS.	17 new 112 PSAPs (Stage 1), and calls to 997, 998 and 999 still received in each agency PSAP	17 112 PSAPs also responding to all 997, 998 and 999 calls (Stage 1 only).
EROs integrated	None	None	
Nº of PSAPs:	422 Stage 1 & 2 PSAPs for FRS 248 Stage1 & 2 PSAPs for Police ??? Stage 1 & 2 PSAPs for EMS	17 Stage 1 PSAPs for 112 (1 per region and 1 more in Warzaw)	
Nº of staff trained in 112 PSAPs:	None	+800	+1365
Relevant call/incident figures:	Average answering time: 14s %80 hoax calls for 112	Average answering time: 11s %50 hoax calls for 112	

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Most relevant milestones:

2010-2013:
- New Ministry of Administration & Digitization
- New Concept of Operations & call traffic analysis.

2014:
- Launch of 17 new 112 PSAPs
- New ICT system

2015:
- All emergency calls answered from the 112 PSAPs (112, 997, 998 and 999).

Some lessons learnt:

Do's:	• Unified procedures and catalogues of questions for all PSAPs • Single training and examination centre for all 112 operators • Ensure legal basis and financial resources for future developments • Strong HR policy: Professional, trained, dedicated and involved employees.
Don'ts:	• Don't intend to do everything at the same time; do things gradually and in separate projects. • Don't forget media campaigns to present and explain changes. • Don't disconnect legacy numbers altogether.

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7.4 Hungary

HUNGARY'S RENEWAL PROJECT

Some figures:

Population:	~10 million (+ visitors)
Area covered:	All Hungary
Regional structure:	19 Counties and the Capital region

Drivers for the change:

- 112 calls were answered by Police at regional level
- Need for increasing the speed of emergency response services and reduce the number of false calls.
- Reduce the workload of county emergency response supervisors by forwarding just relevant calls.

Starting situation vs End situation:

	Starting situation (2010)	**End situation (2014)**
Situation within the government structures:	3 Ministries (Ministry Of Interior Affairs, Ministry Of National Development, Ministry Of Human Resources)	3 Ministries (Ministry Of Interior Affairs, Ministry Of National Development, Ministry Of Human Resources) Governmental IT Development Agency
PSAP model:	Regional EMS (104) PSAPs and regional and local FRS / Disaster Management (105) and Police (107) PSAPs for answering calls and dispatching. 112 calls answered Police at regional level	2 new Stage 1 PSAPs receiving all calls to 112, 104,105 and 107 County-level 2 PSAPs (county level): 22 for EMS and 20 for co-located FRS/DM & Police.
EROs integrated:	-	Police
Nº of PSAPs:	62 (20 for Police, 20 for FRS and 22 for EMS)	2 Stage 1 PSAPs 42 Stage 2 PSAPs for EMS, FRS and Police
Relevant call/incident figures:	6.5M calls overall	8,1M calls overall (5,2M to 112)

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Most relevant milestones:

2010:

- Decision to realize and implement a modern ICT support system in Hungary

2011:

- Project ESR-112 set off by Government Decree No. 1312, and application for EU Funds for the renewal project.
- New act on disaster management.

2012:

- Tendering and contracting of 2 main projects.
- Establishment of single unified disaster management organisation under the jurisdiction of the Ministry of Interior.

2013:

- End of testing, training, and roll-out of new ESR-112 unified emergency call system

2014

- Integration of EMS and FRS via voice and IP network
- All 104 and 105 calls received in Stage 1 PSAP (together with 112 and 107).

Some lessons learnt:

Do's:	• Define a comprehensive IT Plan. • Request EU Funding • Analyze pros and cons of one big tender vs. lots of tenders • Consider tender preparation as a project and define clear, objective and exact tender evaluation processes.
Don'ts:	• Don't stick to a single format of tendering process (negotiation-based, single-stage open tenders, framework contracts, invitation-based small procurements…) • Don't' be too restrictive nor too permissive in the tender selection criteria.

Additional information about the renewal project (http://www.112.hu/en/about_esr_112):

By mandate of Government Decree No. 1312 of 2011, the project is being implemented by a consortium led by the Governmental Information-Technology Development Agency (GITDA), and its members are the Ministry of Interior (MI), the Ministry of National Development (MND), the Ministry of Human Resources (MHR), NISZ National Infocommunications Service Company Ltd. (NISZ), as well as the emergency services affected, i.e. the National Ambulance Service (NAS), the National Directorate General for Disaster Management (NDGDA), and the National Police Headquarters (NPH).

With regards to project governance, high level strategic leadership is provided by members of the High Level Advisory Board, directors and heads of the participating ministries; tactical leadership and supervision are provided by members of the Project Steering Committee, and managers of their delegating organisations; operative leadership is provided by the heads of the Project Offices at MI and NDGDA, and the IT sub-project leader at NISZ, led by the Project Manager at GITDA. The reengineering of the emergency services' business processes to feed into the IT system will be performed by NPH (supervised by MI), NDGDA, and NAS (supervised by MHR). GITDA (as consortium leader) and NISZ, both supervised by MND, are responsible for designing and implementing the IT system.

7.5 Estonia

ESTONIAN TRANSITION TO THE SINGLE EMERGENCY NUMBER 112

Some figures:

Population:	1,3 million
Area covered:	All Estonia
Regional structure:	Administrative division of Estonia: 15 counties, 30 towns, 183 rural municipalities. Estonian Emergency Response Centre consists of four regional centres. Since there is voice and data interconnection and EERC uses the same information system in every regional centre and the call overflow system, every centre can answer all 112 calls made in Estonia, and dispatch all rescue and ambulance resources of Estonia.

Drivers for the change:

- Since 2000 there were two emergency numbers in use in Estonia: European single emergency number 112 (for fire and rescue and ambulance) and national emergency number 110 (for police).
- There was a need to simplify communication between the citizens and the state. The emergency call service satisfaction survey carried out by the Ministry of the Interior in 2008 showed that 85% of the respondents would like the police, fire and rescue and ambulance be available on one phone number.
- One emergency number makes arriving help to the scene faster, since only one emergency number shall have to be remembered, calls are answered faster and information exchange between emergency organizations is faster.
- The service of the emergency number 112 should be developed with integrity and systematically.
- One emergency number enables more efficient communication in raising awareness of emergency number 112.

Starting situation vs. End situation:

	Starting situation (2010)	**End situation (2015)**
Situation within the government structures:	112 calls are answered by the Estonian Emergency Response Centre (EERC) which was under the Estonian Rescue Board. 110 calls answered by the prefectures of the Police and Border Guard Board.	EERC is responsible for the 112 service all over Estonia (answering to emergency messages and dispatching ambulance and fire and rescue teams). EERC is a rescue organization directly under the Ministry of the Interior.
PSAP model:	112 centres with data and voice interconnection using call overflow system. Two-stage working model in use (call-takers and dispatchers	112 centres with data and voice interconnection, using call overflow system. Two-stage working model in use (call-takers and dispatchers are working in

	are working in the same Command and Control Room). 110 centres without call overflow system, 110 operators also acting as dispatchers.	the same Command and Control Room).
EROs integrated	FRS, EMS	POL, FRS, EMS
Nº of PSAPs:	8	4
Relevant call/incident figures:	112 – average answering time 6 sec 110 – average answering time 12 sec	Average answering time 6 sec

Most relevant milestones:

1995-2005: Various reforms took place in the field of emergency message handling.
2005: Regional emergency response centres were formed into a nationwide government agency EERC under the Rescue Board.
2010:

- Beginning of the project.
- Coordination Council for Transition to a Single Emergency Number 112 was formed and working groups for different tasks both on regional and national level.
- The Ministry of the Interior, EERC, Rescue Board and Police and Border Guard Board compiled communication plan to carry out internal and external communication.

2011:

- Police and Border Guard Board started to implement 2-stage emergency call processing system.
- The questionnaires for processing the police emergency messages were developed.
- New integrated national curriculum for call-takers was prepared (police module was added to the 1-year vocational education program at the Estonian Academy of Security Sciences).
- Relevant amendments to the legislation were prepared for restructuring the service provided by EERC.
- The Ministry of the Interior, EERC, Rescue Board and Police and Border Guard Board continued carry out internal and external communication in accordance with the communication plan.

2012:

- EERC was set up directly under the Ministry of the Interior.
- Estonian Academy of Security Sciences launched the first training group on the basis of the new integrated national vocational curriculum.
- EERC launched an in-service training for the existing staff.
- Common Command and Control Room in new building for 110 and 112 service in East Centre; Common Command and Control Room in constructed rooms for 110 and 112 service in West Centre.
- EERC started to service emergency number 110 in East Centre.
- The Ministry of the Interior, EERC, Rescue Board and Police and Border Guard Board continued to carry out internal and external communication in accordance with the communication plan.

2013:

- The bases of the assessment of the quality of processing of the emergency messages of the police area were developed and integrated with the system of quality assessment of 112.
- A new operational voice communication system was launched in EERC.
- EERC started to service emergency number 110 in the West and North Centre.

- The Ministry of the Interior, EERC, Rescue Board and Police and Border Guard Board continued to carry out internal and external communication in accordance with the communication plan.

2014:

- EERC started to service emergency number 110 in South Centre.
- New information system for processing of emergency messages (includes GIS112) was launched.
- Common Command and Control Room in new building for 110 and 112 service in South Centre.
- The Ministry of the Interior, EERC, Rescue Board and Police and Border Guard Board continued to carry out internal and external communication in accordance with the communication plan.

2015:

- Common Command and Control Room in new building for 110 and 112 service in North Centre.
- Everyone in Estonia can call to the emergency number 112 both for police, ambulance and rescue since 11th February 2015. All emergency messages are processed on a harmonised way all over Estonia.
- The Ministry of the Interior, EERC, Rescue Board and Police and Border Guard Board continued carry out internal and external communication in accordance with the communication plan.

Some lessons learnt:

Do's:	• Consolidate the strategic vision of all security authorities. A nationwide renewal requires strong guidance and leadership. • Launch separate working groups for different working tasks. • Consider the huge input in the training as a critical factor for success. Be aware that it is time consuming. • Be proactive in estimating the future need of workforce. • Be aware that despite the fact you have a good plan, there might be thousand of reasons why everything should not go according the plan. • Prepare the plan for communication actions.
Don'ts:	• Don't ignore that people involved to change are most important. • Don't underestimate the needs for active internal and external communication. • Don't assume. • Don't underestimate the role of different organizational cultures.