



**The Israel Fire and
Rescue Authority**

Regulatory Impact Assessment

Policy of adopting international standardization in the regulations of the Israel Fire and Rescue Authority

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Executive Summary

The Israel Fire and Rescue Authority ("INFRA") is the regulator responsible for fire risk management in the State of Israel. Fire protection regulations apply to buildings, businesses, non-business assets, infrastructure, open areas, professionals, and more.

In recent years, various steps were taken to improve various aspects of the Authority's regulations: enhancement of fire protection, enhancement of service, making inspection more efficient, and reducing regulation costs. Following up on these steps, the Authority is advancing a five-year plan to improve regulation. A key component of this plan is the adoption of foreign standards.

The goals of the international standard adoption process are as follows: to ensure that fire protection regulations and the system for overseeing and enforcing them are at an optimal and professional level, to ensure that regulations are coherent, uniform and consistent, to keep the regulatory system up to date over time and responsive to current needs, to reduce the costs of regulations wherever possible – subject to achieving the goals of the regulation and risk management, to simplify processes, and to ensure conformity between the different parts of the regulations (for example, between planning and construction and business licensing).

This document summarizes the process of formulating the policy of adopting international standardization and integrating it into fire protection regulations in the State of Israel. This document only refers to the primary policy decision of adopting international standardization within Israel's fire protection regulations, and does not consider any concrete decision regarding specific regulatory areas (e.g. regulation of restaurants or residential buildings).

First, the current situation and the historical background, of both the organization and regulation, was analyzed. Next, the gaps between the current situation and the goals of the policy change were defined.

Next, leading international standards were assessed: ICC group standards, and NFPA group standards. The assessment of the standards involved a feasibility study on the option of adopting them in Israel. The assessment concluded that the NFPA's system of standards should be adopted, with the NFPA 101 standard ("Life Safety") being the leading standard.



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Later, the effects and implications of the policy decision were assessed, including intra-organizational effects, effects on the public, and effects on the economy. For instance, an estimate of the total anticipated savings stemming from the adoption of international standardization was performed. The estimated anticipated savings to the Israeli economy are about 7.5 billion shekels per year.

Finally, aspects of the implementation of the decision are presented: a preliminary work plan, and guidelines for keeping regulations updated in the future.



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Background: Regulatory history

A. Regulation before the National Fire & Rescue Authority was established

The Israel Fire and Rescue Authority was established following the Mount Carmel Disaster. The disaster occurred on December 1, 2010, and following this event, the structure of fire and rescue services in the State of Israel (henceforth: "the Firefighting Service") was regularized through the Firefighting Services Law - 1959 (henceforth: "the Firefighting Services Law"), and the interior minister was tasked with implementing it. The Firefighting Service was divided into 24 authorities: 20 fire stations operating under the auspices of municipal unions, and four other firefighting authorities operating in the cities of Tel Aviv, Jerusalem, Ramat Gan, and Givatayim, under a municipal department. These unions operated under the Municipal Union Law of 1955, and each authority was directed by a "Firefighting Service Commander".

The Commission was headed by the Fire and Rescue Commissioner (henceforth: "the Fire Commissioner"), who was responsible for managing the Commission and carrying out its tasks as an auxiliary unit of the Ministry of the Interior. The Commissioner also served as the Commander-in-Chief of Firefighting Services (CCFS), as defined in the Firefighting Service Law, and he was appointed by the Interior Minister by virtue of the law's provisions. In this role, he supervised the activities of the firefighting authorities, issued action directives, and demanded accountability on human resources and firefighting equipment. Under this law, the Fire Commissioner had no real command authority, and the heads of municipal unions and local authorities operated independently on professional, operational, and administrative matters¹.

Fire prevention sections²

Fire stations housed a unit named the "fire prevention section", which dealt with the fire protection requirements applicable to structures and businesses. At the time, the prevailing working assumption was the "better judgment" of the fire service commander of the area under the responsibility of the municipal union. The fire service commander (at each of the 24 fire stations) was free to set various requirements for that type of business or structure as he saw fit, based on his best understanding, and purely at his own discretion.

¹For more information on the activities that the Fire Commissioner was responsible for, please see the Firefighting Services Statutes (Powers of the Commander-in-Chief of Firefighting Services) of 1972, and the document on the characteristics of the commissioner's AORs, as defined by the Civil Service Commission in June of 2003.

² The former name of the fire protection sections.



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It should be noted that there were also "CCFS protocols" on various topics,³ which formed the professional guidelines. However, these protocols were written without any proper formulation process. They weren't uniform, no comparison with international guidelines was conducted, the public was not involved, and there wasn't even any legal support. Consequently, they contained errors, inaccuracies and contradictions, and sometimes, the texts of various provisions could be interpreted in several ways. At the time, fire prevention sections were not duty-bound to operate under the provisions of the Business Licensing Law of 1968.

Given the structure of firefighting services (separate municipal unions and the lack of a uniform chain of command for these units), the entire array of firefighting units suffered from a lack of uniformity, and this included fire protection regulation. One example of this involves knowledge management. Most of the fire prevention sections in Israel worked with a program called "Magic", which was used independently by each municipal union. The municipal unions' systems were not networked to benefit from knowledge and content sharing. Dividing the country into 24 unions and authorities created a chaotic situation from a regulatory perspective, and it led to the following problems, to name a few:

- 1) The Firefighting and Rescue Commission lacked the authority to set regulations that would create uniformity and be binding on a nationwide scale.
- 2) The system lacked a legal infrastructure, it wasn't transparent, it encouraged using local discretion, and it contributed to a lack of uniformity and a lack of transparency.⁴
- 3) The Fire and Rescue Commission did not have the required mandates and staff to prepare and implement national multi-year work plans.
- 4) There was a lack of efficient oversight and enforcement measures
- 5) There was a lack of risk management based on a broad, national and comprehensive view, taking into account the nature of the risks and their predicted magnitudes, despite the accelerated developments in the country and the changing risks.
- 6) There was a lack of peer instruction and cross-fertilization within the system.

³CCFS protocols on various subjects, which were published from time to time by the Commission. Today, they are known as "Commissioner Directives".

⁴See, for example, the statutory authority given to the supervisor to approve the technical specifications of firefighting equipment, and other decisions by virtue of the Firefighting Service Statutes (Firefighting Equipment) of 1964, Decision-Making Powers, Changing Decisions and Decisions on Challenging the Firefighting Services Statutes (Firefighting Equipment in Pleasure Domes) of 1969, Decision-Making Authority regarding Regulatory Requirements by virtue of the Firefighting Services Statutes of 1972, and Mandates to Issue Directives and Instructions regarding the Supply of Water and Fire Hydrants Firefighting Services Statutes (Provision of Water and Fire Hydrants) of 1971.



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- 7) There was no infrastructure for a learning and advanced system that adapts to a changing reality and emerging needs.
- 8) There was a lack of uniformity in how needs, thought processes, regulatory decision-making and regulatory writing were analyzed.
- 9) Supervising and supervised publics were not involved in forming and writing regulations.
- 10) Existing regulations were not being updated.
- 11) A lack of learning processes and comparisons with valid, existing, and confirmed international regulation, including European standardization and the NFPA.⁵
- 12) There was a multiplicity of documents, contradictory, double regulation that could be interpreted in various ways, devoid of legal support and with the potential of conduct not in accordance with the rules of proper administration.
- 13) Documentation was lacking (concerning how decisions are made, data relied upon, documentation of regulations implemented on the ground, etc.).
- 14) The organizational culture was founded on a reliance on oral tradition and decision-making based on experience rather than an organized, specified, well-founded, consistent and transparent assessment process.

B. Regulation after the National Fire & Rescue Authority was established

In early 2011, the Israeli government approved the transfer of the firefighting units from the Interior Ministry to the Public Security Ministry, as well as the establishment of the Aerial Firefighting Unit.⁶ On August 8, 2011, the National Firefighting and Rescue Authority Law of 2012 (henceforth: "the Law") was legislated in the Knesset, a law that regularizes firefighting services in Israel as well as the organization's structure and mandates. By law, on February 8, 2013, the Israel National Fire

⁵The NFPA is the National Fire Protection Association (henceforth: "NFPA"), a self-funded non-profit established in 1896, dedicated to preventing death, injury, loss of property and economic loss due to the dangers of fires, electricity, etc. The NFPA provides information and knowledge through over 300 codes and standards supported by research, training, education, and public relations.

⁶In January, 2011, about a month after the fire on the Carmel mountain, the government, headed by Mr. Benjamin Netanyahu, decided (through Resolution 2699) to transfer the operational functions of the Fire and Rescue Commission from the Interior Ministry to the Public Security Ministry, and to transfer the Interior Minister's powers by virtue of the Firefighting Services Law of 1959 (and other relevant laws) to the Public Security Minister. Moreover, it was decided that a government team, led by the Public Security Ministry, would be established, and would assist legislation on the establishment of the Israel Fire and Rescue Authority. In early December, 2011, the Public Security Ministry publicized the Memorandum on the Israel Fire and Rescue Authority Law of 2011. The Israel Fire and Rescue Authority Bill of 2012 was deliberated and approved by the ministerial committee, and publicized in the gazette on March 12, 2019. The bill was passed by the Knesset (Israeli parliament) plenary in the first reading on March 12, 2021, and sent to the Knesset's Interior and Environmental Protection Committee to continue the legislation process.



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& Rescue Authority (henceforth: "INFRA") was established and placed under the Public Security Ministry. As part of the reform, firefighting services in their earlier format were cancelled and transferred from the decentralized municipal framework of municipal unions to a uniform national firefighting service (divided into seven districts, like the Israel Police and the Israel Prison Services).

Once INFRA was established, many changes occurred, which affected, inter alia, firefighting regulation, including the perception of INFRA as a leading, professional and influential regulator in the State of Israel. Thus, the following changes occurred, to name a few:

- 1) The Fire Protection Division and the Fire Protection Array started working pursuant to the provisions of the Business Licensing Law of 1968 and the subsequent statutes, including the Business Licensing Order (Businesses Requiring Licenses) of 2013.
- 2) The Fire Protection Division operated in accordance with Government Resolution 1264 on "Improving and streamlining business licensing processes in the State of Israel" of February 25, 2007, and it is still a leader in writing uniform specifications and in implementing processes for formulating and publicizing the uniform specifications.
- 3) The Fire Protection Division participated in the activities of regulators, in places such as the planning administration boards⁷ (Rescue Committee, the Subcommittee on Construction and Regulations), participated in the inter-ministerial committee on business licensing, participating in the professional and technological committees of the Israel Institute of Standards, and more.
- 4) The Fire Protection Division began using the "Shalhevet" program, which is a nationwide uniform computer system used to consolidate all of the regulatory requirements in the National Fire & Rescue Authority, broken down by use, purpose and category. In April, 2017, the Shalhevet Fire Prevention module's nationwide deployment was complete.⁸
- 5) The Fire Protection Division accumulated specific knowledge and knowhow on penning regulations. In this capacity, it also began correcting and rewriting the directions of the Commander-in-Chief of the Firefighting Services that preceded the reform, and adjust them (with the resources available to it) to the current reality, while rendering them more uniform and more consistent. It also publicized them with full transparency on INFRA's website.
- 6) The Fire Protection Division instructed all of its inspectors to operate in accordance with good governance practices. It determined that regulatory decisions would be made at the regional level, and instructed that regulatory requirements that were not set by the Fire

⁷Which was under the Finance Ministry until May of 2020, and starting on that date, came under the Interior Ministry.

⁸The program contains two modules – a fire prevention module, used mainly by fire protection sections, and an operations module, used mainly by the operations division.



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Commission Headquarters should not be imposed. It was also clarified that assuming powers without an explicit mandate to do so is forbidden, and that it exposes those who do so to legal action, with all that entails.⁹

⁹See State Attorney Directive 73.2 - "Prosecution Policy on the Decision to Indict due to Offenses involving Manslaughter and Causing Injury Recklessly" of January 21, 2018. The directive was written following inquiries from and with the involvement of the Fire Protection Division.



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Defining the problem

A. Defining the problem with the current situation

Fire Protection Regulations in Israel are set by the Fire Protection Division at the National Firefighting and Rescue Authority (henceforth: "the Fire Protection Division"). This regulation is very important, as it protects the public from fire risks. Its costs to the Israeli economy and the Israeli public are estimated to amount to billions of shekels. Like anywhere else in the world, fire protection regulation is very extensive, it applies to many different areas (all buildings, almost all businesses, etc.), and it's very far-reaching: it regulates various domains, like hazardous substances, firefighting equipment, construction equipment, smoke modelling, evacuation of crowds, risk surveys, and more. Despite its great importance, there are gaps in Israeli regulation and things that can be improved about fire protection, as specified below.

First and foremost, the absence of organized processes for devising policy is notable. Historically speaking, only some of the policies and regulations were set following an organized work process. In such cases, decisions were made without any discussions with the relevant functionaries (and without involving the public), and they were made without examining the data that indicated that the problem required regulation in all of its various forms. Sometimes, regulations were drawn up without being based on leading international standards or regulations. No alternatives were assessed or compared. All of this resulted in the issuance of inadequate directives that engendered difficulties, questions and various problems.

In essence, the National Fire & Rescue Authority lacks organized, written and professional doctrine regarding its fire protection concept – one that would consolidate all of the regulatory instructions on this subject. Thus, there is no one integral, harmonious and professional regulatory system. Directives also lack uniformity, and they aren't synchronized.

Israeli regulations are based on a wide range of sources. Some are based on international regulations or specialized international standardization. Some are informed by international sources, while others are uniquely Israeli. Oftentimes, Israeli regulations are penned first, and it is only at the end of the process that international regulation and specialized standardization on a given subject is examined.

The National Fire & Rescue Authority is limited in its ability to create and substantiate Israeli regulations on its own. Fire protection is a complex topic based on many engineering disciplines, such as construction engineering, electrical engineering, chemical and materials engineering, mechanical engineering, and more. To set directives, empirical engineering research must be performed, on topics like the nature of fire propagation, the fire resistance of structures, or the behavior of smoke movement within a particular space. These studies are numerous and expensive. They are complicated, from an



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engineering perspective, and protracted, as far as research is concerned. The State of Israel does not have the required budgetary resources or the expertise and experience to conduct these types of studies, based upon which standardization can be determined and intelligent risk management can be performed, so that regulations can be set.

Other countries in the world have established a regulatory framework for fire protection, and they operate in accordance with regulations that have been demonstrated as effective. This framework is regularly updated to reflect changes in the environment, technology, and more. Naturally, large countries and international organizations have an intrinsic advantage over small countries like Israel, thanks to the resources available to them. Those countries benefit from resources that Israeli regulators do not have access to, and they also rely on professional work and research done by non-state organizations such as the NFPA and the ICC.¹⁰ Non-state standardization organizations are key players in the world of fire protection. These are very professional and have many resources available to them. The NFPA, for instance, has 60,000 active members, who are experts in various fields, and those members take part in studies and in setting standards. Many countries based their regulations on the professional standards formulated by these non-state standardization organizations.

In the current situation, Israel fire protection regulations are consistently inferior to fire protection regulations elsewhere in the world. Creating an integral and harmonious regulatory system and ensuring that it is kept up to date and accurate has been a consistently difficult task for quite some time. This difficulty surfaces every time a new risk is discovered, or whenever a new activity requiring regulations occurs (such as generating electricity from renewable sources or storing electricity in containers). As a result, specialized research must be conducted, data must be collected and analyzed, risk management must be performed, and a comprehensive regulatory framework must be instituted. In the absence of comparable resources, creating good, well-founded, and consistent independent Israeli regulations on par with regulations in advanced countries around the globe is quite challenging. We should also emphasize that even the largest and wealthiest countries (like Western Europe countries and the United States) do not create their fire safety regulations independently. Instead, they opt to adopt the standardization of non-state standardization organizations.

Furthermore, the vast majority of fire protection aspects, including risks, engineering work assumptions, technological advances and demographic developments are identical worldwide. Therefore, in that sense, Israel has not faced anything unique that the rest of the world hasn't dealt with in the past. Consequently, creating unique Israeli regulations would result in redundancy, since specialized regulations and equivalent regulations already exist elsewhere in the world. Beyond the

¹⁰ For instance, the United States extensively adopted the NFPA regulations (including policies based on the NFPA as a central pillar of their fire protection regulations, in states like California, Texas and Florida. Many other countries, like Canada and the UAE, also adopted the NFPA's system of standards.



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quality gap resulting from this redundancy (due to the resource gap mentioned earlier), this is also a waste of resources (time, budget, manpower), and it prolongs the regulator's response time to new risks and activities that regularly adapt to our dynamic reality. Moreover, while comprehensive and harmonious standardization and regulatory systems exist elsewhere in the world, Israeli regulations do not cover all areas, they do not provide solutions to all issues, and they aren't harmonious with each other. This is another effect of the resource gap, the redundant regulations, and the absence of a holistic view of the fire protection concept. Finally, the NFPA's specialized standardization is frequently assessed and updated once every few years. Its updating process involves gathering data, and conducting studies, discussions, and professional analyses, which also require investing considerable resources. In contrast, Israeli regulations do not employ a proper periodic assessment and instruction update routine, and consequently, instructions could end up out of date for many years, without adapting to our dynamic reality or to our actual needs.

If unique Israeli regulations are created (which sometimes conform with international standardization), they aren't good enough, whereas the world's foremost experts on fire protection have already commented on those subjects and written good, updated, and accurate regulations. Our experience with creating unique Israeli regulations is that it does not provide a comprehensive regulatory solution. Sometimes, regulations aren't harmonious or clear enough, and users are unsure of how to implement them. As a result, many questions and inquiries are made, both by the general public and by field units, regarding the regulations that were determined, how to implement them, and how they holistically dovetail with other regulatory instructions.

Too many documents, like letters, protocols and instructions, have been published, and are still being published frequently, in order to respond to the need coming from field units and the public. These documents are design to respond to a specific need, so they are released in response to a need from the field. They aren't the product of a predefined work plan, they lack an integrative vision, and they aren't always produced through an organized process involving staff work or policy analysis, even though they have a substantial effect on fire protection and on the general public. We end up with a pile of papers written ad hoc, like patchwork, as a reaction to an urgent need, with no planning or comprehensive overall logic. Sometimes, these documents are even contradictory. This has a direct effect on supervised entities, like civilians, entrepreneurs, and safety consultants, who sometimes have outdated or partial information, or internal, unapproved drafts of staff documents. These challenges make it very difficult for field units, who are responsible for oversight, and on the supervised public, and they often entail high costs that are unnecessary, from a professional standpoint.

This has affected and will continue affecting this project. In the absence of a uniform and harmonious regulatory doctrine, it's hard to evaluate and update regulations. That is why this international standard adoption project and regulation reform must take into account how we handle



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this phenomenon from this now on. The International Standard Adoption Project ("ISAP") will integrate and be based on a project meant to manage and preserve the knowledge we already have – a project the division is advancing in parallel at the current time.

B. Defining the need and goals of the regulations and policy change

The problem defined above raises the need to improve the regulations issued by the fire protection units. This need is also reflected in the government's policies, which, in recent years, have focused on improving regulations, as part of a regulation policy concept aiming to boost their effectiveness and efficiency. A number of government decisions have formed the backbone of this policy.¹¹

After mapping the needs stemming from the problem, as it was defined, the following are the main needs that must be responded to:

1. The need to write codes: a good, written and organized doctrine on the fire protection concept, which consolidates all of the regulatory instructions on the subject
2. The need to define an organized, uniform and consistent process for writing new regulations and amending existing regulations, based on international regulations
3. The need to substantiate Israeli regulations on engineering research data based on many years of experience and expertise on regulatory topics (for example: fire propagation, the fire resistance of structures, or the behavior of smoke movement within a particular space)
4. The need to update existing regulations regularly and methodically, while adapting them to varying needs, our dynamic reality, developments in technology, demographics, and so forth
5. The need to position Israeli regulations as advanced, updated and professional, compared to similar types of regulation elsewhere in the world
6. The need to avoid creating unique regulations, which results in redundancy, since specialized regulations and equivalent regulations already exist elsewhere in the world
7. The need for comprehensive, satisfactory and holistic regulations that can respond to the various risk

¹¹ The process began with Government Decision 3756 of September 9, 2011, on "Adopting the recommendations of the report issued by the Committee on Socio-Economic Change - continued discussion (the Trajtenberg Committee Report)". Subsequent government resolutions are Government Resolution 4027, from December 25, 2011, on "Streamlining and improving government regulations", Government Resolution 708, from August 25, 2013, on "Bettering, coordinating, and improving government regulations", Government Resolution 2118, from October 22, 2014, on "Reducing the regulatory burden", Government Resolution 4191, from January 29, 2012, on "Increasing competition and reducing the cost of living", and Government Resolution 4398, from December 23, 2018, on "Smart regulation: Implementation of OECD recommendations and amending the government resolution".



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Lastly, the lack of resources must be remedied. Professional standardization in the world is frequently assessed and updated, once every few years. Its updating process involves gathering data, studies, discussions, and professional analyses, which also require the investment of considerable resources. In contrast, Israeli regulations do not employ a proper periodic assessment and instruction update routine, and consequently, instructions could end up being out of date for many years, without adapting to our dynamic reality or to our actual needs.

If unique Israeli regulations are created (which sometimes correspond with international standardization) this results in the regulations not being good enough, while the world's foremost experts on fire protection have already commented on those subjects and written good, updated, accurate regulations.

Our experience with creating unique Israeli regulations is that it does not provide a comprehensive regulatory solution. Sometimes, regulations aren't harmonious or clear enough, and users are unsure of how to implement them. As a result, many questions and inquiries are made, both by the general public and by field units, regarding the regulations that were determined, how to implement them and how they dovetail holistically with other regulatory instructions.

To summarize this section, the goal of the change of regulations is to adapt Israeli regulations to leading regulatory doctrine on fire protection, to ensure that the regulations are effective and efficient, and to keep them updated, clear, and comprehensive.



Alternatives and preferred course of action: international standards

A. Existing US standards

Historically, the National Fire & Rescue Authority had chosen to base itself on American standardization as a leading source for devising applicative and technical fire protection requirements. There are two leading code families in the United States, which have existed, in various forms, since 1890. The code families were almost equally pervasive throughout the United States from the time of their inception (though they cover different fields of expertise). American codes are developed by private standardization organizations, and are adopted, with modifications, by states and counties. Due to the American federal system, a state may adopt a particular code for its state regulation, while a city or county within that state may adopt a different code for their local regulations. Furthermore, the US Fire Administration (unlike local government) can adopt a code other than those mentioned above.

These are the two code families:

1. International Code Council (ICC)

The ICC has developed 15 different codes dealing with various aspects of construction, and not necessarily with fire safety aspects. For instance, ICC standards deal with aspects of construction, sanitation, and so on. Despite its name, the code isn't designed to be an international code, and it is adopted mainly in the United States.

There are two main codes within the ICC related to fire protection:

The **International Building Code (IBC)**, a code that deals with various aspects of the construction of new buildings, including fire safety aspects. The IBC is a clear-cut construction code adopted by many states within the US as construction and planning regulations.

The **International Fire Code (IFC)**, which complements the IBC, deals with fire safety aspects and covers the fire safety requirements for both new and existing buildings. For instance, it defines the types of businesses whose licensing is conditioned on satisfying fire protection requirements.

2. National Fire Protection Association (NFPA)

The second family of standards is the one created by the NFPA. The organization handles safety aspects, and mainly fire safety, and it has developed over 300 different codes. Some of those codes are applicative (i.e. they determine which firefighting arrangements are required for each type of building or business), and some deal with the technical elements of fire safety (the engineering structure of smoke



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detectors, sprinkler requirements, the method used to install and maintain fire extinguishers, etc.). It should be noted that the ICC codes also reference the NFPA's codes (both applicative and technical codes).

The NFPA has two central applicative codes tied to aspects of fire safety.

The **NFPA 5000** – a building code equivalent to the IBC. The code covers various facets of construction and is designed for new buildings. The standard is designed to protect the structure and its contents (and not the lives of those within the building and in its vicinity).

NFPA 101 – a code corresponding to the IFC that deals with fire safety and determines the fire safety requirements for saving human lives. The code specifies the firefighting requirements and arrangements for both new and existing structures.

It's important to emphasize that in practice, the codes do not fully overlap. As mentioned, the ICC's main standard is the building standard (IBC), while the NFPA's main standard is the fire protection standard concerned with saving lives by evacuating people wherever there is a fire or hazardous substance risk (NFPA 101). These standards have different roles, and they aren't interchangeable.

The following table summarizes the characteristics of these codes:

	ICC		NFPA	
	IBC	IFC	5000	101
The code's objective	All aspects of construction, including stability, safety and wellbeing	Protection from the building's fire hazards	All aspects of construction, including stability, safety and wellbeing	Protection from the building's fire hazards
Types of buildings they apply to	New only	New and existing	New only	New and existing
Adopted mainly by	Local government	Firefighting authorities	Local government	Firefighting authorities
Leading standard?	✓			✓

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To understand the professional and in-depth process of formulating and updating the codes in both families, we'll offer the example of how the NFPA works. There are 236 technical committees in the NFPA, and it has thousands of members. The committees deal with updating the various codes so that each code is updated regularly, once every two to five years (after a revision process that lasts about two years). Aside from fire safety experts, representatives from various sectors, like insurance companies, industries, commerce, government and local officials, health care institutions, safety system manufacturers, engineers, architects, and others participate in this process. The code is created through a process that involves the public, who participate throughout the code updating process.¹² This is illustrated in Figure 1.

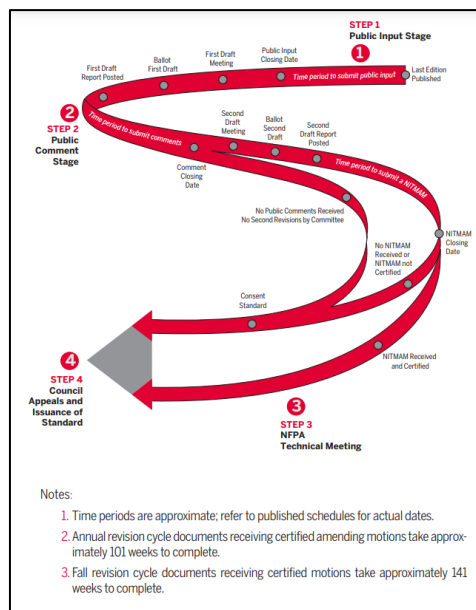


Figure 1

B. The adoption and implementation of codes in US regulations

The two code families are extensively adopted in the United States (on the state, county, and local levels). Therefore, every state adopts one of the codes from these two families.

In the United States, local governments are responsible for all aspects of building structure (stability, construction, sanitation, etc.), and they adopt either the IBC or the NFPA5000 construction codes. In contrast, firefighting authorities are the ones responsible for fire safety, so they adopt one of the relevant fire hazard codes from the IFC or the NFPA100. This is because fire safety codes focus on fire hazards and establish requirements for both new and existing buildings (business licensing), a topic that is not covered by the construction codes.¹³

The IBC was adopted by many states and local governments as their main construction code, while the NFPA is extensively adopted as fire protection regulations. The NFPA enjoys a very prominent and prestigious status in the United States. Thanks to its massive research apparatus, the organization has developed databases used as the aggregate data of the various states in the United States, and its codes are frequently updated to reflect changes on the ground and statistics that are

¹²For more on this, please see the NFPA's website at [https://www.nfpa.org/~media/files/codes-and-standards/regulations-directory-and-forms/Std Dev Process Booklet 2018.ashx?la=en](https://www.nfpa.org/~media/files/codes-and-standards/regulations-directory-and-forms/Std%20Dev%20Process%20Booklet%202018.ashx?la=en)

¹³This is viewable on a dynamically updated map on the NFPA's website: <https://codefinder.nfpa.org/?country=United%20States%20of%20America&state=California&agency=Cal%20OSHA&nfpnumber=101><https://codefinder.nfpa.org/?country=United%20States%20of%20America&state=California&agency=Cal%20OSHA&nfpnumber=101>



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regularly collected and analyzed.¹⁴ It should be noted that most states (and even counties and local governments) generally adopt a single code as their leading base code.¹⁵ The state introduces certain changes into this code, but usually, they do not mix the different codes.

The choice of code family in the United States seems to be affected by two main factors: the identity of the entity adopting the code (state/county/city) and historical decisions made in the early part of the 20th century.

1. The adopting entity: The identity of the leading entity varies. In some states, regulation was adopted by state authorities, in others, by local officials. This is illustrated in the maps that appear below (Figures 2 & 3), which show that at times, adoption is at the state level, and at other times, at the local level. In practice, the codes were extensively adopted in the United States, through either state regulations or local regulations.

This map displays whether the NFPA 101 was adopted on the state level¹⁶

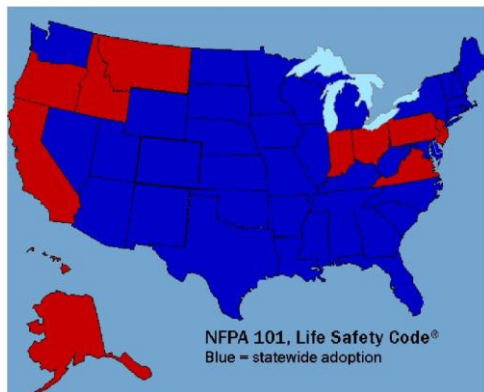
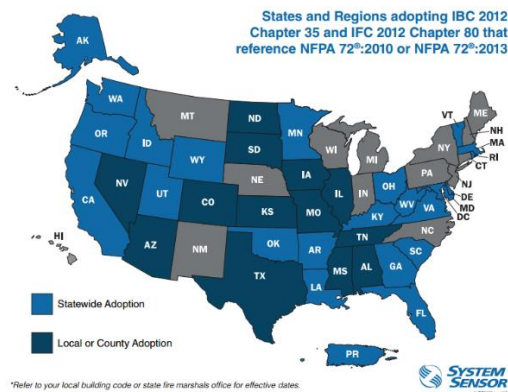


Figure 2

This map displays the entity (state/local) that adopted the NFPA 72 standard on detectors¹⁷



3 Figure

2. The history of American standardization: In the late 19th century, fire safety and building safety standardization organizations started being established. For example, the NFPA (National Fire Protection Association) was established in 1896, and began formulating and publishing documents concerning protection from fire hazards. Over the years, the NFPA grew

¹⁴NFPA - Data, research and tools. For more, see: <https://www.nfpa.org/News-and-Research/Data-research-and-tools>

¹⁵For example, the website of Florida's State Fire Marshal describes the adoption of the NFPA 101 standard, in "track changes": <https://www.nfpa.org/~media/files/codes-and-standards/regulations-directory-and-forms/Std%20Dev%20Process%20Booklet%202018.ashx?la=en>

¹⁶Source: <https://slidetodoc.com/chapter-1-about-the-codes-keep-in-mind/>

¹⁷This map was created by System Sensor.





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increasingly dominant, and incorporated the standardization of other organizations. For example, the NFPA "swallowed" a fire protection code called the Uniform Fire Code (UFC), which had been adopted, at the time, by 25 different states. At the same time, standardization organizations operating in the field of construction had been established, each of which having published its own codes. In the mid-20th century, three construction standardization organizations came into prominence: The Building Officials and Code Administrators (BOCA), The International Conference of Building Officials (ICBO), and the Southern Building Code Congress International (SBC). Each organization emerged in a different part of the United States, and accordingly, the various building codes were adopted in different parts of the country, based on their geography (see Figure 4 below¹⁸). In 1994, construction standardization organizations merged to form one organization: the International Code Council (the ICC).

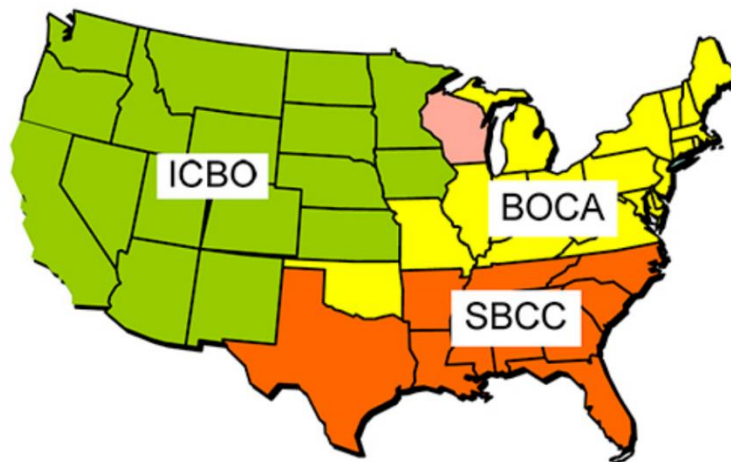


Figure 4

The 100-year long competition between the two code families (the NFPA and the ICC) caused them to resemble each other over time. An assessment performed by Shalhevet, a consulting agency in the service of the Prime Minister's Office, discovered that there are no major gaps between the standards in terms of fire protection, but the two families use distinct methods, each with its own internal logic (i.e. definitions, breakdown by building type, etc.). In practice, the codes are evolving and becoming more specific at the same time, and the competition between

¹⁸ Source: Rossberg, Jim, and Roberto T Leon. "Evolution of Codes in The USA", NEHRP, 2013, 12.



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them has led the two families to conduct research and specialization processes in order to develop better codes.

Currently, the adoption of this or that standardization system is based mainly on historical decisions made during the first half of the 20th century. States that had created a legislative infrastructure and regulations based on one family code did not replace it, because today, that would be a complicated thing to do. Those historical decisions (a major part of which were made over a century ago) are the main factor that informed the type of standardization adopted by each state.

C. Considerations when choosing a family of standards for adoption in Israel

There doesn't seem to be a dramatic difference between the two families in terms of fire protection. Even though they are based on different methods and approaches, in practice, the standards they set aren't substantially different. Accordingly, there does not seem to be a major difference in the cost to the public, either.¹⁹ The two standards were extensively adopted in the United States, and were even adopted in other countries. The two organizations and families of standards are considered to be the industry leaders and are considered highly professional.

The main way we could identify gaps between the standards involved determining their conformity with Israeli regulations and the applicability of adopting those regulations.

The Costs of Regulation

Since each code family is a system packed with instructions, in the current framework, quantifying the costs of complying with all of their instructions and requirements would be unfeasible. Of course, a detailed quantification of the costs of the changes made will be done for some parts of the standard adoption process, but this is great deal of work involving making decisions about how those requirements should be adjusted to the Israeli ecosystem.

As specified below, we based ourselves on two studies that compared the NFPA and the ICC. The first was done for the Prime Minister's Office, and the second, for the Public Security Ministry.

A. Analysis of the gaps between the standards (Prime Minister's Office)

In 2018, the Prime Minister's Office requested that the gaps between the different standardization systems be assessed. The main conclusions from the analysis that was conducted were

¹⁹ It should be stated that in order to draw an unequivocal conclusion, a detailed analysis of all of the provisions of both standards must be performed, after which they each provision must be compared with the equivalent provision. This analysis wasn't performed by us, due to the many complexities and costs it involves.



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that the final outcomes of applying either standard weren't substantially different, even though the standards are founded on different principles.²⁰ For example, the NFPA 101 is based on a breakdown according to use (requirements for industrial structures, requirements for educational structures, requirements for residential structures, etc.), while the IFC is categorized by system type (where fire detection systems are required, where automatic extinguishing systems are required, etc.). Therefore, this built-in variance makes it hard to compare the two. Moreover, it found that the IFC usually referred to new buildings (that hadn't been built yet), and it seldom relates to existing structures.

B. Comparing the requirements and costs of the standards with respect to educational institutions (the Public Security Ministry)²¹

The analysis performed at the Public Security Ministry assessed the costs of compliance for kindergartens and schools, comparing the requirements of the NFPA 101 with those of the IFC. It focused on central requirements: sprinklers, pumps, detectors, manual fire alarms, detection in the distribution board, fire hydrants, fire cabinets, and fire extinguishers.

The following table displays the results of the analysis and a cost estimate performed by the Public Security Ministry, with regard to the costs of fire protection regulations for educational facilities (i.e. schools and kindergartens):²²

	Israel	NFPA 101	IFC
Estimate of regular costs (annual)	127 million shekels	43 million shekels	41 million shekels
Estimate of one-time costs	1.02 billion shekels	304 million shekels	249 million shekels

The analysis and estimate performed by the Ministry of Public Security is provided here not as an exact calculation, but rather to get a basic idea of the situation and understand its scale. It's important to keep in mind that the estimate is limited to one domain (educational facilities) and that one may not

²⁰ The assessment was done with respect to the requirements to install detection systems and extinguishing systems for a variety of uses, including industry, commerce, educational institutions, hotels and storage facilities.

²¹ The Public Security Ministry, Planning Division, Budgeting and Control, "Assessing the Impact of Regulation (RIA) - Fire Safety in Existing Educational Structures" (December 2018).

²² It should be noted that the data provided here was collected by the Ministry of Public Security, and it has not been examined and validated by the National Fire & Rescue Authority.



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draw conclusions from this data on the costs of the standardization system. For example, the fact that the costs of the IFC requirements are lower than those of the NFPA requirements with regard to educational facilities does not mean that this is the case for other uses, like industry, residential facilities, and commerce. We can see that there isn't a major difference between the requirements of the NFPA and those of the IFC as far as costs are concerned. This conclusion is further strengthened upon comparing them to the current requirements in Israel (and we note here that we may presume that international standardization will need to be adjusted to Israel).

Conformity with the Israel National Fire & Rescue Authority's regulations

Overview

For years, the National Fire & Rescue Authority has been operating in accordance with the professional doctrine of the NFPA's standards system.²³ For instance, the National Fire & Rescue Authority classifies all businesses and structures into three risk levels (for the purposes of prioritization, supervision and enforcement), and according to the risk ratings that exist in NFPA standardization.²⁴ Besides the system used to classify by risk level, over the years, many of the Authority's provisions were determined based on NFPA standards, under the understanding that this is the leading standard and method guiding the formulation of fire protection regulations.

Commissioner Directive 550: "Detection and Firefighting Systems"²⁵

Types of uses appearing in Commissioner Directive 550: "Detection and Firefighting Systems" (henceforth: "Commissioner Directive 550") comply with the NFPA 101. We can see that the use types (and the order they appear in) also correspond with those in the NFPA (whereas the classification in the ICC is completely different). Furthermore, within the classifications themselves, the risk properties for each classification were done in accordance with the NFPA, as we see from the following examples:

- In the chapter on commerce in Commissioner Directive 550 and in the NFPA, there are three risk levels (Groups A, B and C). The parameters in the Commissioner's directive are almost identical to those in the NFPA.

²³ Ministry of Public Security and National Fire & Rescue Authority, "Summary Report for Improving Regulations for 2018 - Fire Safety", Clause 2.1 (2019). Available at:

https://regulation.gov.il/uploads/reports/7/BATAP_Firefighting_2018.pdf

²⁴ The Government Comptroller, "The Fire and Rescue Commission and Firefighting Authorities: Prevention of fires in high-rise structures, businesses and institutions" (2012). Available at:

https://www.mevaker.gov.il/he/Reports/Report_114/528391d7-3e78-4f3f-8fa8-4c9ef405c219/7943.pdf?AspxAutoDetectCookieSupport&AspxAutoDetectCookieSupport=1

Available at: https://www.gov.il/he/departments/policies/directive_550



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- The definition of the "Student Dormitories" use, and comparing them, in certain cases, to residential buildings, and in other cases, to hotels, is clearly the concept used by the NFPA 101
- The eased restrictions documents published for industry²⁶ require an engineer's statement saying that no sprinklers are required for the industrial plant. This is in accordance and based on the text in the NFPA 101.
- The directive itself includes references to a number of NFPA standards dealing with technical aspects of firefighting systems.

Commissioner Directive 529: "Availability of the water supply network and the distribution of fire hydrants"²⁷

The risk levels were determined based on the NFPA. The risk distribution for buildings in this directive was done based on the NFPA standard.

Business Licensing Specifications

Since all of the specifications are based on the various commissioner's directives, specifically the commissioner's directives on infrastructure (like those discussed above), the business licensing specifications are based on the NPFA and conform with them.

Correspondence with planning and construction regulation

One of the main issues in fire protection regulation is the correspondence between requirements during the construction phase of new buildings and requirements that will apply to existing buildings. Construction and planning processes generally deal with new buildings, while business licensing regulations and dedicated National Fire & Rescue Authority regulations for business that do not require a license (like hospitals, educational institutions, defense structures and facilities, and more) deal mainly with existing buildings. It is very important that the two sets of regulations correspond with each other, for various reasons, including the need to ensure that requirements of a new building will comply with the requirements applicable to the same building after construction is complete, at which time it will be

²⁶ Head of the Fire Protection Division, "Fire Safety Requirements in Existing Businesses - Reducing Regulations – Commissioner's Approval – Clarification" (September 4, 2017). Available at: https://www.gov.il/BlobFolder/policy/decreasing_regulation_in_current_bussiness/he/%D7%93%D7%A8%D7%99%D7%A9%D7%95%D7%AA%20%D7%91%D7%98%D7%99%D7%97%D7%95%D7%AA%20%D7%90%D7%A9%20%D7%91%D7%A2%D7%A1%D7%A7%D7%99%D7%9D%20%D7%A7%D7%99%D7%99%D7%9E%D7%99%D7%9D%20-%20%D7%94%D7%A4%D7%97%D7%AA%D7%AA%20%D7%A8%D7%92%D7%95%D7%9C%D7%A6%D7%99%D7%94%20-%20%D7%90%D7%99%D7%A9%D7%95%D7%A8%20%D7%A0%D7%A6%D7%99%D7%91%20-%20%D7%94%D7%91%D7%94%D7%A8%D7%94_2.pdf

²⁷ Available at: https://www.gov.il/he/departments/policies/directive_529



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considered an existing building (e.g. after construction is complete, a business license for the structure can be obtained).

Therefore, there is great value in ensuring that the National Fire & Rescue Authority's regulations applicable to existing buildings conform to institutions under planning or construction (processes in which INFRA is involved in an advisory capacity, but is not the regulator that issues building permits).

The provisions of the Planning and Construction Statutes (request for permit, conditions and fees) - 1970

The definitions chapter of the Planning and Construction Statutes (request for permit, conditions and fees) - 1970 (henceforth: "the Statutes") recognizes the NFPA's standardization, and explicitly refers to the NFPA as the authorized source wherever there is no Israeli standard:

"Standard" – Israeli Standard (henceforth: "IS"), and in the absence of a said standard, a standard of the National Fire Prevention Association – the NFPA – which discusses matters tied to firefighting and rescue services.

The assembly chapter in the standards was drawn up and written in accordance with the provisions of the NFPA.²⁸

The new Chapter 4 of the Planning and Construction Statutes (which is expected to be published in late 2021), meant to replace Commissioner Directive 550, was created in accordance and in conformity with the NFPA 101, by joint teams from the Planning Administration and INFRA.

Previously, the Planning Administration, as the official regulator responsible for planning buildings, chose the NFPA 101 standard as the leading standard that it would use. The reason for this was that the standard centered on saving lives, and not on preserving structure and property, based on the perception that protection of property is a job for insurance companies and real estate developers, and that the state could not act as an insurer against property damage. Another consideration that guided the Planning Administration is the high safety standard provided by the NFPA 101. In official on-record discussions held between the Rescue Committee and NFPA representatives, the NFPA representatives stated explicitly that their statistics demonstrated that there were no casualties in buildings complying with the requirements of NFPA 101 over the previous decade, even though there were up to two major failures in compliance with the requirements.

²⁸The information in this section is based on comments made by the then chairman of the Rescue Committee, Eng. Hagai Dvir, on behalf of the Planning Administration.



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Feasibility concerns

An assessment demonstrated that there are experts on the NFPA in Israel, but there are no experts on the ICC. This situation seems to be the result of a consistent decision that has been in place for decades, a decision of both INFRA and the Planning Administration, to see the NFPA as the leading professional standard that they would use. Since there are no experts in Israel that are well-versed in the ICC standards, it would be hard to find experts that could support a foreign standard adoption process based on the ICC, and it would be even harder for INFRA to hire employees with a command of the ICC standards. Moreover, the public required to comply with the regulation (business owners, entrepreneurs and planners) are familiar with the principals and work methods of the NFPA. Substituting the leading method from the NFPA with the ICC would lead to confusion and make it harder for the regulated public to work with INFRA's regulations.

C. Interim Summary

In this chapter, we saw that there are the two professional standardization systems in the world with fire safety standards: the ICC's system (which stands at the foundation of the IBC, a leading building code), and the NFPA's system (which stands at the foundation of the NFPA 101, a leading fire safety code). Both systems are based on the work of professional organizations that have invested in research and thorough validation and formulation processes, and both standard systems have been extensively adopted in the United States and in other countries as well.

However, the NFPA enjoys a practical advantage with regard to its adoption in Israel. In fact, the standard has already been adopted, both within the National Fire & Rescue Authority's regulations and in planning and construction regulation. A major part of the applicative provisions, the technical standards, and the regulatory principles (such as the risk classification method) are based on the NFPA. Extensively adopting another standardization system would be a considerable deviation, and it would undermine the system that has been running until today. Furthermore, the National Fire & Rescue Authority's ability to influence planning and construction legislation is limited. Since the NFPA has been integrated and explicitly enshrined in planning and construction statutes, it should be given preference, in order to ensure conformity between the rules applying to new buildings and those applying to existing buildings.

In light of the above, it seems that although neither of the standardization systems have a built-in advantage, the NFPA's standardization system, and the NFPA 101 in particular, has a clear exogenous advantage: it conforms with the method widely used today in Israel, and there are experts and professionals in Israel who are familiar with the system and have mastered it. Therefore, the decision made was to adhere to the NFPA and adopt standardization based on the NFPA, with the NFPA 101



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serving as the leading standard. It stands to reason that the IFC and other international standardization will be used as complementary sources, but the leading standard will be the NFPA 101.

גלאי עשן מציל חיים



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Intraorganizational influence

The project to adopt international regulatory-professional doctrine, with an emphasis on the NFPA's standards, will essentially replace the current regulations in the State of Israel and the current method used for creating new Israel regulations, both in the general sense (e.g. regulation of businesses, industry, trade and more), and on a more specific level (e.g. electricity, sprinklers, detectors, etc.). Moreover, the project will establish a method for periodically updating regulations, while assessing updates to international standardization and responding to needs emerging from the field, as done in the NFPA, frequently and continuously. This project will have profound intraorganizational impacts, since this is a lateral and systemic project with an enormous effect on the economy and the government.

Impact on human resources

The National Fire & Rescue Authority is a large and leading regulator in the State of Israel, and all of the regulations written and managed by it are implemented by the Regulation and Legislation Department, which, at the time this report was issued, consisted of a director and four employees.

The standardization adoption project is complex, multi-faceted, and long-term. In this project, all of the existing regulations in the National Fire & Rescue Authority will be mapped, and the international standardization for each topic will be assessed, with a view of the entire set of regulations. In this context, the following activities will be performed:

1. Drawing up new Commissioner Directives and replacing the old Commissioner Directives
2. Drawing up new uniform specifications and replacing the old uniform specifications
3. Cancelling/correcting existing statutes
4. Cancelling/correcting standards or taking steps to change their status (binding/official)
5. Writing new standards conforming with international regulation
6. Cancelling/correcting letters, instructions, and external/internal protocols
7. Writing an operating concept protocol for the fire protection sections and fire inspectors
8. Assessing the impact on the work of other regulators, including the Planning Administration, the Chief Standards Officer, and other entities such as the Israel Institute of Standards, the National Authority on Certifying Laboratories, and more
9. Creating a protocol for writing new regulations, and a protocol on how existing NFPA-conforming regulations are to be amended.
10. Implementing the entire reform in the Shalhevet program, including changes, corrections and deletions, within hundreds of categories and subcategories.²⁹

²⁹ The Shalhevet Program can only be updated manually. Today, these updates are performed by a knowledge management officer, who is the only person authorized to do so within the Shalhevet program's entire content editing system. ISAP will



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For this project and all of its associated tasks to succeed (only some of those tasks are listed above), the right dedicated resources must be invested, both quantitatively (in force design) and qualitatively (relying on educated professionals with backgrounds in engineering, law, economics, and analytics, both within the National Fire & Rescue Authority and outside of it). This means that the project will require a major organizational change. More resources will be required by the Legislation and Regulation Department, and the organization will need to outsource tasks in various areas, including expertise on international standards, professional translators specializing in English for engineering, financial analysis services, language editing services, and more.

The effect on the Fire Protection Division's operating concept

The National Fire & Rescue Authority's regulations are broad and professionally complex. Much of the Legislation and Regulation Department's work today is responding to inquiries and needs from the field. The department's area of responsibility requires it to perform professional work such as analyzing of safety issues, collecting and relying on data, assessing previous documents and decisions, conducting comparative international studies, involving stakeholders and the public, consulting with outside entities (such as the Israel Institute of Standards, the Electricity Authority, etc.), and more. The Fire Protection and Licensing Department's³⁰ AOR is implementing and deploying the deliverables of the Legislation and Regulations Department among the supervised public and inspectors. Though the international regulation adoption project will not affect the division of labor between the two departments of the Fire Protection Division mentioned above, it will transform the operating concept of each of them, and affect the way the entire division works, as detailed below.

The National Fire & Rescue Authority's regulations are currently enshrined in a variety of legislative sources, including statutes, commissioner directives, and protocols. To have the hierarchy of law of the National Fire & Rescue Authority's directives conform with accepted practice in other regulatory areas, the intent is for most of the National Fire & Rescue Authority's regulations to be enshrined in statutes. However, the possibility of issuing and publicizing commissioner directives to provide a rapid response to new risks or other changes will be preserved. The possibility to publicize

require thousands of various corrections within various categories and subcategories, in relation to all of the existing uses, with no exception (businesses, assets and building permits). A great deal of thought must be invested in this highly important project, since any mistake would harm a tool used by the inspectors as they do their jobs, and would adversely affect the reliability of the Shalhevet software and the implementation and deployment of the reform.

³⁰ In the National Fire & Rescue Authority's Fire Protection Division, as at the time this report was written, there are two departments: the Legislation and Regulation Department, responsible for writing national fire protection doctrine, and the Fire Protection and Licensing Department, responsible for implementing and deploying the doctrine in the field.



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the professional echelon's protocols as a response will be preserved as well, when, for example, issues involving the interpretation of directives arise.

Furthermore, the Legislation and Regulations Department will reassess and determine the Fire Protection Division's stance on types of business that will need to obtain approval from the National Fire & Rescue Authority to receive a business license³¹ based on international standardization. To that end, it will rewrite all of the uniform specifications published in the gazette so that they conform with the NFPA 101, and it will also write all of the new uniform specifications in a similar fashion from this point on. It will also cease writing new, random and ad-hoc regulations which typically involve creating an Israeli source that is not based on international standardization like the NFPA 101. In parallel, there will be a decision made on a policy change in the Fire Protection Division, diverging from the policy hitherto in use for making decisions and issuing instructions using makeshift letters. Pursuant to the new operating concept, any regulatory decisions relevant to the entire country will be made using a validated protocol that follows a uniform format, which will be publicized, with full transparency, on the National Fire & Rescue Authority's website. Concurrently, all instructions, letters, or previous decisions previously made on this topic will be cancelled.

Another conceptual change will involve the Legislation and Regulations Department's involvement in fire safety and fire protection regulation, in domains that another regulator is responsible for. For example, the Fire Protection Division's current operating concept on planning and construction laws is limited solely to consulting to construction and planning authorities in the field. The National Fire & Rescue Authority acts solely as an observer³² during the stage at which regulations on construction and planning laws are made and decisions are taken. As part of ISAP, INFRA is taking steps to ensure that it plays a much more active role in setting regulations in the area of planning and construction laws, such that an INFRA representative with voting rights will attend the relevant committee meetings.

Similarly, the Fire Protection Division's operating concept will change with regard to setting standards in the State of Israel. Although the Fire Protection Division, including its Legislation and Regulations Department, constitutes a small and marginal part of the standard setting process today, even if those standards aren't purely fire protection standards, the change in the operating concept will mean that the Israel Institute of Standards will follow the policies of the National Fire & Rescue

³¹In accordance with the Business Licensing Order (Business Requiring Licenses) of 2013.

³²The National Fire & Rescue Authority does not have a representative with the right to vote at meetings of the subcommittee on construction and statutes, and at the Planning Administration's National Council (at the Interior Ministry). This is despite the fact that these two committees are major players that shape regulations concerning construction and planning law in the State of Israel, including topics tied to fire protection and fire safety.



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Authority when it comes to fire protection standards, and will take steps to adopt American standardization, such that all relevant standards conform with the adopted international standards.³³

Furthermore, the Fire Protection Division's operating concept will change in terms of how regulatory decisions are made, and an inter-ministerial team will be formed to coordinate and support the international standards adoption process so that the Legislation and Regulation Department's activities will receive support from a broad team and ensure that it conforms with the international regulations.

Another change will manifest in how the Fire Protection Division routinely operates. In fact, the farther along ISAP progresses, the more established and well-known the foundation for fire protection doctrine will become. It will become common knowledge in the sense that it will be easier to implement and deploy. In this context, the Legislation and Regulation Department's work (and consequently, the work of the entire Fire Protection Division) will change completely. In the long term, the project will save the employees of the Fire Protection Division and the Legislation and Regulation Department a lot of time and work.

Most of the changes to the Fire Protection Division's operating concept, as specified above, will manifest in the Legislation and Regulation Department's organizational structure, which will be composed of professional branches (in accordance with the supervised area): Policy and Regulations (which will support policy development processes), Research and Data Collection, Management of Regulatory Knowledge, and the Digitization Project Leaders Branch. This will differ considerably from the current situation, in which the department does not conform with international standardization, and the vision isn't synchronized with reality. This impact will also manifest in the Legislation and Regulation Department relying heavily on outside consultants and legal advisors supporting the adoption of standards and the writing of regulations.

³³As defined in the Standards Law of 1953.



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The impact of the operating concept on the National Firefighting and Rescue Academy

The National Firefighting and Rescue Academy (henceforth: "the Firefighting Academy") is responsible for all training, courses, CPDs and seminars on a variety of topics that the National Fire & Rescue Authority handles, including fire protection, through the Fire Protection and Investigations Track. As of the time this document was written, the Fire Protection and Investigations Track at the Firefighting Academy was led by a track leader with the rank of lieutenant colonel firefighter.

In 2020, the Fire Protection and Investigations Track trained 995 students at the Firefighting Academy³⁴, and during the first quarter of 2021, it trained 252 students. The vast majority of them received training through a variety of courses, CPDs and seminars³⁵:

Courses	Continued Professional Development (CPDs)	Seminars
Basic fire protection course	CPD on sprinklers	Seminar on building materials
Advanced fire protection course	CPD on detectors	Seminar on flammable liquids
Senior fire protection course	Blueprint reading CPD	Blueprint reviewing seminar
Blueprint reviewing course	Water supply CPD	Licensed fire safety controller competency day
Smoke management course	CFD CPD	Electricity and gas seminar

³⁴ 995 students were enrolled in the Fire Protection and Investigation Track, with the following distribution: 555 students were trained as fire protection inspectors, 120 students, including students from outside of the INFRA, were trained as part of a program for maintaining firefighting competency, and 320 were trained in fire protection, as part of their operational training program.

³⁵ This data was taken from a presentation prepared by the commander of the Fire Protection and Investigation Track at the National Firefighting and Rescue Academy, entitled "2020 Annual Summary and Approval of the Training Gantt Chart for 2021" (2020).



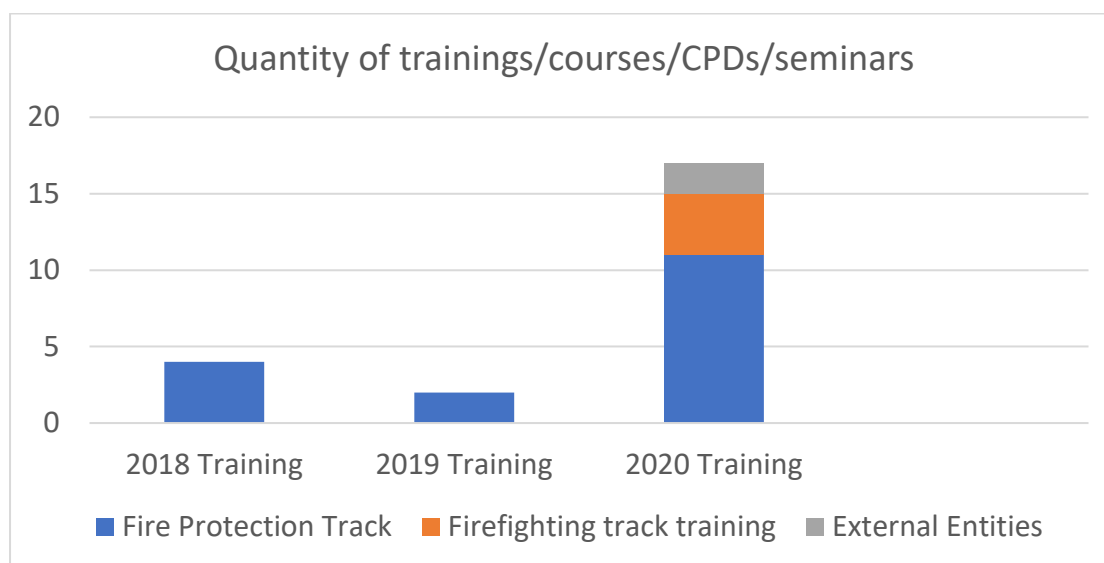
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Licensed fire safety controller course	HAZMAT CPD for inspectors	Licensing reform seminar
Fire investigator course	Fire protection trainer course/CPD	Seminar on defense plants
Advanced fire investigator course		Youth camp seminar

As the years progressed, we've noticed an increase in the supply and demand of training and the range of topics in the field of fire protection:



All of the courses and trainings described above are based on the knowledge and experience amassed at the fire protection sections and blueprint review centers, and as such, they are firmly based on current regulation (statutes, standards, commissioner's directives, protocols, etc.). ISAP will require the Firefighting Academy to rebuild each training and study program in the Fire Protection and Investigation Track from scratch. This will involve rewriting all of the eduware, instructional presentations, lesson plans and training videos that are used today.

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Moreover, the Fire Protection and Investigation Track will need to run a marathon of accelerated mass training programs throughout the country in order to complete the process of training, study, implementation and deployment of all of the adopted regulations, in two ways:

1. For the entire system: the fire protection cadre (including station and district commanders) and every inspector in the entire country (about 300 men and women). It stands to reason that firefighters, too, will need to undergo fire protection training, due to the adoption of the standards.
2. For those outside of the National Fire & Rescue Authority, who routinely receive training and CPDs through the Fire Protection and Investigation Track on various topics, in organizations like the Israel Nature and Parks Authority, the Jewish National Fund, the Israel Airports Authority, defense facilities, the IDF (the Home Front Command and others), the Israel Prison Service, the Negev Nuclear Research Center, defense industries (both civilian and military), factory teams, and so on.

These groups comprise of thousands of students per year, and this translates to a tremendous strain on the Firefighting Academy, and more specifically, on the Fire Protection and Investigation Track. An urgent solution for mass training must be found, and new knowledge on the new regulations being adopted will have to be synchronized among everyone. This complex operation will require meticulous planning, adequate logistical preparations early on, an adequate solution for staff, budgeting, and more. Therefore, the Firefighting Academy will need the right resources, primarily more staff in the Fire Protection and Investigation Track.

Impact on the Legal Bureau

At its foundation, ISAP involves writing new Israeli regulations, and requires that the existing regulations be cancelled. This move, from beginning to end, involves complex legal issues, such as existing regulation law, retroactive application, the legal hierarchy between different types of documents, issues of jurisdiction, litigant accountability, managerial writing and rules of proper administration, support and consultation on proposals under the Arrangements Law, standards, proposals and memorandums of law, support for procedures involving contracting with external consultants, settlement of conflicts of interest and issues of maintaining confidentiality, consulting on the proper track to use for setting regulations, support on legal wording, legal support to the Knesset committees and government meetings, coordination with the Consultation and Legislation Division in the Ministry of Justice and the legal bureaus of the Interior Ministry and other ministries, and so forth. Even after ISAP has concluded, the Legislation and Regulation Department will regularly require legal support so that it can respond to legal issues that this move will engender, and it will especially need close legal support on frequent and constant amendments to statutes (which will be done, on average, once every 3-6 years), in accordance with the changes conducted in the NFPA.



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Currently, the Legislation and Regulation Department does not ordinarily have a legal advisor on its staff. The entire Fire Protection Division relies on legal support from the Dan Region's legal advisor on a temporary basis, as the legal advisor has other responsibilities in the district.³⁶ The adoption of international standards will require adding the suitable earmarked resources for the project based on its progress and the stage it is in, and this includes a dedicated position for legal advisors in the Legislation and Regulation Department (which will be subordinate to INFRA's chief legal advisor), who are experienced with regulations and supporting standardization procedures.

³⁶In its current form, the Fire Protection Division is comprised of 20 staff members, divided into two departments: the Legislation and Regulation Department and the Fire Protection and Licensing Department. The division deals with a broad and diverse range of topics. Its decisions affect the entire country, and their financial cost for the entire Israeli economy is considerable.



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Public and extra-organizational impact

ISAP is broad and systemic, with an enormous effect on the economy and the government. During this process, the National Fire & Rescue Authority will formulate new commissioner provisions that will replace the previous commissioner provisions, it will institute new statutes to enshrine the commissioner provisions in statutes, it will make amendments to the construction and planning statutes (to enshrine the adoption of the NFPA standards in the chapters and clauses that cover fire safety), it will change all of the existing uniform specifications on business licensing, it will change the way that new uniform specifications are written in the future; and it will adapt all of the existing Israeli standards on fire safety and fire protection (such as technical standards for products) to the accepted and corresponding NFPA standards, noting the required adjustments for Israel.

Thus, it's clear that ISAP will essentially affect all of the current fire protection regulation, as well as legislation, standardization, protocols and standards. It will also affect others in the public and outside of the organization, government ministries, public entities, and the entire Israeli economy, in particular those involved in construction, business licensing, assets (businesses that do not require licenses), forests and woodlands, national infrastructure, laboratories, and more.

The following are the main public and extra-organizational impacts:

A. The Planning Administration in the Interior Ministry, the Israel Builders Association, and all of the entities affected by construction and planning law

As part of ISAP, INFRA will send the Planning Administration texts for the amendment to the planning and construction statutes, in accordance with NFPA standardization, to ensure that provisions applying to new buildings going through planning and building licensing procedures are coordinated and synchronized with the provisions applying to buildings at later stages. Furthermore, the National Fire & Rescue Authority will have influential representation at the various committees by virtue of the Planning and Construction Law of 1965, in the National Council on Planning and Construction, and at the Subcommittee on Construction and Statutes. In this way, the National Fire & Rescue Authority will ensure conformity between Israeli regulations on planning and construction and international regulations, with regard to safe construction incorporating smoke and fire safety, which serves the purposes of evacuation and protection of human lives.

The immediate implication of this step is how it will affect the determination of requirements and how they are physically implemented in the State of Israel, in a way that will allow us to rely on the logic and expertise amassed over many years on construction, building safety, and the principle of escape in new Israel construction. It will also lead to enormous savings to the Israeli economy due to the reduction of regulations on construction requirements and requirements to install detection and



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firefighting systems of various kinds, which are currently required, without this being fully synchronized with international standards.

B. Licensing authorities, the Licensing Division in the Interior Ministry, and Israeli business owners

As part of ISAP, INFRA will assess its position on the components of licensing and on how involved it must be in the process, as an approval authority for each of them. Later, INFRA will send the Interior Ministry texts for the business licensing specifications in order to reflect the NFPA's standardization requirements on fire protection for business licensing processes where it must serve as an approval authority. The immediate impact will be on all business owners in the State of Israel. INFRA's requirements will be either reduced or cancelled after those requirements are made to conform with international standards. Beyond the major savings in terms of costs to the Israeli economy, this will also immediately affect the "Doing Business" index, and provide major relief to business owners who wish to open and manage their businesses.

C. The Israel Institute of Standards, the Ministry of Economy and Industry, Structures/Businesses required to adhere to Israeli regulations

As part of ISAP, INFRA will determine which Israeli standards from the Israel Institute of Standards are to be cancelled and replaced by the newly adopted NFPA standards (and alternate standards from equivalent organizations). The Israeli standards from the Israel Institute of Standards will be cancelled, and the Minister of Economy and Industry, the Regulatory Administration and the Israel Institute of Standards will take steps to make regulations in Israel conform with the provisions of the NFPA standards, pursuant to INFRA's position. Standards that do not conform with the NFPA will be cancelled. In parallel, international regulations other than NFPA, regulations (e.g. European regulations) will be adopted into Israeli regulations on technical standards for products and systems (such as standardization of smoke detector and fire detector systems). These steps will provide considerable relief to the Israeli economy by reducing or eliminating the costs of testing by the Israel Institute of Standards and the laboratories currently required (for installing systems, maintaining systems, building standards, etc.), and will allow us to open the Israeli economy to competition with regard to both the products and systems themselves and the ones testing and certifying the said systems.

Indirectly, the enormous savings in costs will also be felt by end users, purchasers of apartments, offices, business consumers, and so on. Moreover, opening the market to standards that conform with NFPA regulations, with European regulations as an alternate solution, will encourage international trade, remove import and export barriers on products and systems, remove bottlenecks caused by laboratory testing and other types of testing, and promote international commerce and economic



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cooperation of various types. It also stands to reason that the savings in time and costs will encourage more construction and industry, which will affect every resident of the State of Israel, in some way or another.

D. Other impacts

Relying on a professional international source will allow us to adopt standardization harmoniously, and reduce redundancies and unneeded requirements, based on the best and most accessible professional knowledge. This reliance will translate to more certainty for the National Fire & Rescue Authority with regard to the needed regulations and reduce the safety margins that were taken due to uncertainty. Furthermore, the holistic adoption of a harmonious regulatory framework will reduce uncertainty, eliminate redundancies, and keep provisions focused on what is genuinely needed, without compromising on vital standards. Creating proper doctrine and an updated and harmonious regulatory system will also ensure that provisions are improved and that regulatory requirements are made clearer to the public. That will affect public inquiries, services provided to the public and the sense of certainty the public feels on various issues (e.g. construction, business licensing, other assets, etc.).

ISAP will also have an impact on the ability to be dynamic and provide rapid and up-to-date responses adapted to technological and demographic developments as well as other developments, such that even new issues that emerge will be met with a quick, professional, high-quality and customized response. For the public, this means that the wait time for formulating provisions in new areas will be significantly reduced.



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The economic impact on the Israeli economy

Overview

INFRA is one of the largest and most impactful regulators in Israel, if not the largest of them. INFRA creates extensive regulations that apply to almost all businesses that require business licenses, all erected buildings (housing, commercial, services, public structures), infrastructure, and open spaces (such as forests and woodlands). In total, the INFRA's regulations apply to about 140,000 businesses requiring licenses, and about 420,000 assets that do not require licensing. In planning and construction, the INFRA is involved in 14,000 building permit proceedings each year and is a signatory to "Form 4" (i.e. the permit that allows a builder to populate a building after construction is complete).

Another way to understand the scale of INFRA's impact as a regulator is through the regulatory burden it imposes (meant to protect human lives and protect property, as intended by the law). In 2017 alone, measures were taken to reduce the regulatory burden, which led to direct savings to the Israeli economy of over one billion ILS. According to the Prime Minister's Office, the reforms that were conducted between 2016 and 2018, which involved government ministries, led, in aggregate, to a cost reduction of about 2.7 billion ILS per year. Thus, according to data from the Prime Minister's Office, a single reform in the National Fire & Rescue Authority reduced about 40% of the total governmental costs (and that doesn't include the other measures and reforms made by INFRA).

It is beyond question that ISAP will result in two major things: improving the quality of Israeli fire safety regulations, and significantly reducing INFRA's regulatory costs. Among the reasons for this are the following:

- Relying on a professional international source will allow us to adopt standardization harmoniously, and reduce redundancies and unneeded requirements, based on the best and most accessible professional knowledge.
- This reliance will translate to more certainty for the National Fire & Rescue Authority with regard to the needed regulations and reduce the safety margins that were taken due to uncertainty.
- Adopting existing international standards and regulations requires less resources than those needed by the system for producing new Israeli regulations.
- Adopting international standards will help remove import/export barriers, having reduced the unique Israeli requirements. Therefore, after the standards are adopted, competition is expected to expand.
- It creates an opportunity to strengthen economic, commercial and academic collaboration on fire safety between Israel and other countries.



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Estimate of the current costs of regulatory requirements, and the potential savings thanks the adoption of international standards³⁷

When quantifying costs, we see that the current response for complying with firefighting requirements in the State of Israel costs the Israeli economy is about 24 billion ILS per year. After adopting NFPA standards, costs to the Israeli economy will be tremendously reduced. Most of the cost reductions will be direct, and some will be indirect. A conservative estimate puts the savings to the Israeli economy at about 7.5 billion ILS per year. These are the main annual costs to the economy of complying with firefighting regulatory requirements:

1. The costs of complying with firefighting regulations to planning and construction process: The annual cost of construction in Israel is estimated at about 170 billion, 95% of which is construction subject to INFRA's regulations. Assessments performed in the past found that the cost of complying with firefighting regulations are about 7% of this amount. Therefore, the annual cost of complying with firefighting regulations to the Israeli economy to planning and construction processes is about 11 billion (ILS) per year.
2. Costs of regulatory requirements to business licensing processes: Firefighting requirements for business licensing involve one-time requirements during the setup of the business, and ongoing annual requirements. According to the assessment, the cost of complying with the requirements during the establishment of a business is about 2.2 billion shekels per year, and the cost of complying with ongoing regulations is about 1.3 billion shekels (the setup costs are calculated based on the working assumption that each year, 26,000 license-requiring businesses are created, with about 150,000 businesses in total). This means that the total cost to the economy of complying with firefighting regulations is about 3.5 billion shekels.
3. The costs of firefighting regulations to assets that do not require licensing (such as educational facilities, social service facilities, defense facilities and others): there are about 430,000 of these assets in Israel. Since we lack data, for the purposes of this document, we assumed that the setup and maintenance costs of these assets are the same as business licensing costs, and that the volume of new assets being created is directly correlated with new businesses. By our

³⁷ The estimate displayed below is based on a top-down approach, which uses a macro perspective of INFRA's requirements. Accordingly, the estimate is not based on data from any particular building or business. Rather, it reaches estimates based on the general trend and the wider picture. This estimate is designed to reflect the magnitude of the costs, and should not be seen as a tool to precisely calculate a specific cost item or element.



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calculation, the estimated cost to the economy of assets that do not require licensing is about 10 billion ILS.

With regard to the anticipated savings, the comparative study we conducted on adopting NFPA standards in educational facilities in Israel found that the estimated savings to the economy are about 70%, for setup costs, and about 66%, for ongoing maintenance costs. Based on this test case, the adoption of NFPA standards in Israel could lead to savings of about 13 billion ILS. To be on the safe side, a conservative estimate of the potential savings, of just 30%, approximately, will be used, giving us a figure of 7.4 billion ILS per year in savings to the Israel economy thanks to the adoption of NFPA standards³⁸.

³⁸An explanation of how the estimated savings to the economy following the adoption of the NFPA standards was calculated can be found in Annex B of this document.



Initial planning for the implementation of the decision to change the policy

Currently, INFRA regulations are enshrined in a variety of legislative sources. The vast majority of regulations are enshrined in commissioner directives that were determined and issued by virtue of the Israel Fire and Rescue Authority Law. The required outcome at the end of the process will be a full, comprehensive and quality regulatory code on fire protection, most of which will conform with international American (NFPA) standards, except for required changes, which will require adjustments in certain cases, as listed below. A proper doctrine and an updated and harmonious regulatory system will also ensure that provisions are improved and that INFRA's regulatory requirements are made clearer to the public. To have the hierarchy of law of the National Fire & Rescue Authority's directives conform with accepted practice in other regulatory areas, most of the National Fire & Rescue Authority's regulations will be enshrined in statutes. There will also be an option of issuing commissioner's directives in order to quickly respond to new risks or other changes. This amounts to many dozens of statutes that INFRA intends on enacting within the next five years, which will form comprehensive regulations on fire protection in all existing areas, purposes and uses (business licensing, businesses that do not require licensing, and assets).

ISAP, and in particular, the adoption of NFPA 101 regulations, is a complex process that requires extensive preparation and planning of the process, its stages, and its milestones. Many entities will partner in this project, including various government ministries and stakeholders in the Israeli economy. Because of the national significance of this project, it will be enshrined in the Arrangements Law for the Israel Economy for 2021 (henceforth: "the Arrangements Law"). The project architecture, which is described in this chapter, will form the foundation for a comprehensive methodology that will reflect all of the project's work processes and milestones. The following is a description of the main stages that will form the basis for planning this project. Their content is expected to change, as is their order of execution, as determined at a later time when the project's high-level planning document is written.

1. Starting out: contracting with experts and writing the detailed work plan

This is the initial stage that will allow contracting with fire protection experts well-versed in the NFPA. These consultants will support the process from the very outset. They will help formulate and write a precise and detailed work plan that will provide the basis for executing the project and writing its methodology, broken down by year, half-year, quarter, and shorter durations as well, based on the INFRA's requirements. For each time segment in the Gantt chart, a core topic will be determined, which will be mapped and checked against existing Israeli regulations, such that the detailed work plan will, in practice, serve as a statement of intent on the work rate and division of labor, and allow each entity



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involved throughout the process to prepare.³⁹ Subject matter experts will be paired with analysts, who will assess the current costs and expected cost savings for each topic that is assessed. Moreover, a dedicated project manager will be contracted, who will help integrate the various entities, oversee progress and ensure that the determined objectives and milestones are met.

2. Mapping the NFPA standards

At this stage, the leading NFPA standards will be divided into two main groups:

- a) Applicative standards: Standards which mainly determine the requirements themselves and explain what needs to be done (firefighting arrangements, installation of systems, equipment requirements, fire resistance, width of openings, etc.). These standards, like the NFPA 101, include references to professional standards to be implemented (these are the technical standards specified below), so they have almost never been changed over the years by the NFPA.
- b) Technical standards: The "how" standards. Unlike the applicative standards, these are practical standards meant to be implemented, which explain how the requirement is to be complied with. They are, by nature, professional and technical. For example, NFPA 13 determines how automatic sprinkler systems are to be installed. NFPA 72 determines how fire detectors and smoke detectors, as well as early warning and alarm systems, are to be installed (including their location, technical connections, field coverings, etc.). Technical standards are subject to frequent adjustments, based on needs, changes in construction, technological developments, and other variables. Accordingly, there are countries (including the State of Israel) that have chosen to adopt these professional standards verbatim, and in the original (such as NFPA 13, which was adopted in Israel as Israeli Standard 1596, and except for minor adjustments to the Israeli ecosystem which were added into the Israeli standard, the entire standard remained in the original language - engineering English).

3. The stage of breaking down the standards by topic

The assessed standards will be broken down by topic, category and use. INFRA's AOR and mandates will be determined for each one (as opposed to another regulator, for example). Thus, as an example, fire protection and safety standards on the construction of new buildings will be associated with the domain of planning and construction laws, which are under the jurisdiction of the Interior Minister (the Planning Administration is the professional entity in this case). However, fire protection

³⁹For instance, pursuant to the Gantt chart and the future order in which the topics will be handled, which will be publicized as part of the detailed work plan, the Firefighting Academy will be able to prepare for conducting the necessary training nationwide on these subjects. Another example is the Justice Ministry's Consultation and Legislation Division, which will be able to rely on this plan as it prepares to receive the text of the statutes from INFRA on these topics.



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and safety standards for existing buildings and businesses will be associated with the domain of the Israel Fire and Rescue Authority Law or enshrined in uniform specifications by virtue of the Business Licensing Order, which the Interior Minister has the authority to issue. Most of the technical standards are associated with the domain of setting professional standardization, under the Israel Institute of Standards, which is headed by the Chief Standards Officer and the Minister of Economy and Industry.

4. The translation stage

The National Fire & Rescue Authority intends on translating the main NFPA regulations defined as applicative standards into Hebrew, so that they can form the foundation for all of the INFRA's requirements (in terms of all of the building types and uses that the NFPA refers to). These translated standards will replace all of the written commissioner directives that currently exist, and will even affect the written uniform specifications (published in the records) and the writing of new uniform specifications from now on. In parallel, the main technical standards from the NFPA will be translated into Hebrew as well. Only the most essential adjustments will be made to adapt them to the Israeli ecosystem, such that they will optimally reflect international regulations. The translation of NFPA standards is no simple matter. Translating a standard into a foreign language requires a high level of technical skill, full familiarity with the standard and its internal logic, an engineering mindset, and the ability to write fluently in both the source language (English) and the target language (Hebrew).

5. The assessment, comparison and adjustment

During the first stage, all of the Israeli regulations on fire protection, including laws, statutes, commissioner directives, uniform specifications, protocols, and so on, will be mapped. During the second stage, all of the said Israeli regulations will be examined and categorized according to predetermined topics and uses, in accordance with the equivalent NFPA chapters (commerce, industry, hotels, health care facilities, educational facilities, business licensing, residential, etc.), and they will also be categorized into regulations for existing vs. new buildings. During the second stage, all of the topics will be prioritized based on their importance, urgency, need from the field, and other considerations, such that we will end up with a list of all of the regulatory topics that need to be handled, in the order of importance determined by INFRA.

Next, "round tables" with think tanks will be established and will run in parallel. Their ranks will be filled by subject matter experts on the NFPA, fire protection staff from the INFRA, and others (analysts, consultants, PMs, etc.)(Henceforth: "the Think Tank"). Each Think Tank will receive the topic it will be responsible for, following the established order of importance of the topics. The topic will be professionally assessed, and a meticulous plan will be developed for it, while comparing the regulations on the topic in the NFPA and the current Israeli regulations on the same topic. Notably, the Think Tank will not discuss the question of whether to adopt the topic from the international NFPA standards. Its aim is to discuss the question of matching US regulations with Israeli regulations, and

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discovering the delta, i.e. the gap that requires "Israeli" adjustments, if such a gap exists. The ultimate goal of the Think Tank is to fully correlate Israeli regulations with American regulations, with utmost importance placed not just on the content of the regulation, but on the structure of the format in which it is written. In other words, even if the content of an Israeli regulation on a particular topic corresponds with the content of the equivalent NFPA regulation, the Think Tank is responsible for adjusting it in terms of the format it is written in as well (i.e. writing structure, numbering, headers, clauses, etc.).⁴⁰

Since the Think Tank's main goal is to avert deviations from the NFPA's standardization, an orderly and extensive process will be conducted before any decision to deviate from NFPA standardization is made. In cases where the Think Tank is compelled to make Israel-specific adjustments, a professional discussion will be held in the INFRA, and it will prepare for consultations with the higher regulations committee. Adjustments to the Israeli ecosystem could be required, inter alia, for the following reasons:

- a) Regulatory-organizational variance (inspection method, ability to perform customized and individualized licensing, Israeli legislation, and so forth, like the NFPA 70, which is essentially the counterpart to the Israeli electricity law)
- b) Objective variance (temperature and climate differences, etc.)
- c) Topical variance (missile fire on Israel, building styles, the age of the structures, etc.)
- d) Variance in firefighting doctrine
- e) When a standard is missing (in this case, the preference is clearly to use another international standard from a leading system)
- f) When international standardization isn't applicable or places a major strain on the system, and it can be deviated from in order to alleviate the burden on the public without creating a major exposure to fire risks

After the assessment of a particular topic is complete, including decision-making on required adjustments to Israel, the Think Tank will set it in writing, in two parallel formats: statutes sent for approval to INFRA's legal bureau, and from there, on to further processing by the Justice Ministry's Consultation and Legislation Department, so that the statutes can be approved in the Knesset, and Commissioner's Directives, which will serve as a binding regulatory document that will remain valid until legislative proceedings in the Knesset, involving the enactment of the said statutes and their publication in the official gazette, are complete. After the relevant statute is enacted and published in the gazette, the commissioner's directive will be cancelled, as well as any other existing directive on this topic (including existing statutes, letters of instruction, protocols, etc.). This will result in one consolidated and binding Israeli statute for each topic that the Think Tank had finished working on. The

⁴⁰ Maintaining the NFPA's format is extremely important for the continued maintenance of the adoption process, as INFRA will need to make updates from time to time to the adopted regulations.



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Think Tank will continue to the next topic it is responsible for, based on the stages described above. It is worthwhile to note that the Think Tank's work will also affect Israel's standards system, and it will include issuing a recommendation to INFRA on cancelling or amending standards and changing their statutory status (binding/official), all in accordance with NFPA standardization.

6. The stage of coordinating the Regulations Committee

The international standard adoption process will be exempt from performing an RIA process and from being discussed by the Advisory Committee on Regulations, as per clause 126A of the National Firefighting and Rescue Authority Law of 2012, with the exception of adjustments to Israel, if any are made, as described above. The idea is to allow the process of adopting foreign regulations and converting them into Israeli regulations to proceed uninterrupted, in light of the fact that the entire initial process of examining the regulations, assessing alternatives, consulting with stakeholders, performing a cost-benefit study, weighing professional considerations and risk management, relying on existing international regulation and so on have all been done by the NFPA, making it unnecessary to duplicate the process in Israel.

7. The stage of coordinating with elements within and outside of the government

At various stages, the Think Tank will consult with stakeholders, the "target audience", which may vary, and others that will be affected by the regulation. These could be equivalent government ministries or others in the Israeli economy outside of the government. Furthermore, the way that the Think Tank operates will affect the work of other regulators, who will receive the Think Tank's deliverables in batches, and whenever possible, after prior coordination. For instance, when chapters dealing mainly with new buildings are discussed – chapters that may affect construction and planning laws in the State of Israel – the Think Tank will prepare a chapter dealing mainly with regulations on existing construction and planning laws, which will replace the existing equivalent regulations (if there are any), or will be integrated as new regulations in the domain of construction and planning law. In such a case, INFRA will send the Planning Administration texts for the amendment to the planning and construction statutes to ensure that provisions applying to new buildings going through planning and building licensing procedures are coordinated and synchronized with the provisions applying to buildings at later stages. The Planning Administration will accordingly amend the planning and construction statutes.

With regard to business licensing, INFRA will send the Interior Ministry texts for the business licensing specifications in order to reflect NFPA's standardization requirements on fire protection for business licensing processes in which it acts as an approval authority. The Interior Ministry will need to publish the updated uniform specifications for the amendment that the National Fire & Rescue Authority had sent.

When matching Israeli standardization to international NFPA standardization, INFRA will determine which Israeli standards from the Israel Institute of Standards are to be cancelled and replaced by the



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newly adopted NFPA standards (and alternate standards from equivalent organizations) in the statutes, by virtue of the National Fire & Rescue Authority Law. Israeli standards from the Israel Institute of Standards will be cancelled once the replacement statutes are published, or at a time determined by the said Arrangements Law. In parallel, additional international regulations other than NFPA regulations (e.g. European regulations) will be adopted into Israeli regulations on technical standards for products and systems (such as standardization of smoke detector and fire detector systems).

The amendment and enactment of the statutes, as described above, will require the active and intense involvement of the Consulting and Legislation Department of the Justice Ministry, and the approval of a Knesset committee. This means that this part of the process is not under the control of the National Fire & Rescue Authority, so there may be delays or even a pause in progress due to a decision made by an outside entity. This is another reason why commissioner directives will be written at the same time that statutes are drawn up on the same topic. While the legislation process in the Knesset could be delayed, a response will be provided for needs from the field based on the Think Tank's deliverables.

8. The implementation and deployment stage

Each time a Think Tank finishes working on a particular topic, as described above, the regulatory change will need to be quickly implemented and deployed in the field, both within and outside of INFRA. The implementation and deployment stage will require writing a complementary protocol with explanatory notes and methods of operation for the fire protection sections, since it will include comments on the change to the operating concept in the fire protection sections (related to that topic) and coordination with INFRA's operational arm. The intense implementation and deployment activities will require aggressive and collaborative work by the Fire Protection Division and the Firefighting Academy. Within a relatively short, the Firefighting Academy will need to prepare eduware, lesson plans and presentations that are all based on the international standards that were adopted, and they will need to be ready to teach them to all firefighting employees working in the field of fire protection (thousands of workers: fire protection inspectors, firefighters and staff workers), and others (like safety consultants, factory teams, safety officers, the IDF, the Israel Airports Authority, the Israel Prison Service, the Jewish National Fund, and so forth).⁴¹ It is notable that the Firefighting Authority will consider contracting with a company specializing in supporting organizational changes like the changes described above, so that they can be integrated and deployed as rapidly and as optimally as possible.

⁴¹ For more on the impacts on the National Firefighting and Rescue Academy, please see the dedicated chapter on the topic.



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Maintaining and preserving the adoption process over time

The goal of ISAP is to create a uniform and organized fire protection doctrine based on experience gained over many years throughout the year in the form of international regulations and standardization, so that fire protection regulations are optimized, and so that they can be kept that way over time, while updating them, as circumstances dictate. All of the NFPA standards are examined and updated once every three years by an expert committee with members from across the United States, who possess specialized education, knowledge and experience on the relevant regulations. The NFPA's work processes are conducted through hundreds of professional committees with tens of thousands of subject matter experts on fire protection, which are based on genuine experience, familiarity with new techniques and technologies, and feedback from the public. Its updating process involves gathering data, studies, discussions, and professional analyses, which also require the investment of considerable resources. All of this is done to ensure that it continues providing a response within a dynamic reality, based on how successful the final outcome is. The process is certified by ANSI, the American National Standards Institute.

The implementation of ISAP by the Firefighting Authority isn't merely a one-time revolution and a replacement of Israeli regulations with international regulations adapted to the NFPA. It also involves devising a mechanism for updating the regulations, to include establishing the method for periodically updating regulations, while examining emerging needs in Israel and providing them with a response. In this way, regulations will be updated frequently, based on changes in our reality (environment, technology, etc.), and they will continue providing a response for many years, and not just at the time the regulations are being adopted.

Currently in Israel, there is no organized routine for periodically examining and updating provisions, and consequently, provisions could go for many years without being updated or adapted to changes in our reality or needs from the field. Today, the plan is to periodically assess regulations once every six years, since this frequency is double the time it takes for NFPA standards to be assessed and updated. This is a preliminary plan that will be updated based on the update rate, the scale of the resources that will be required, efficiency considerations, and the need to balance keeping the regulations updated with maintaining stability in the market.



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International collaboration

Currently, the Fire Protection Division doesn't operate at all internationally, and is not proactive. It doesn't participate or play any role whatsoever in collaboration with its counterparts elsewhere in the world. The reason for this, first and foremost, is the major regulatory gaps between Israeli regulations (most of which are original) and NFPA regulations. Once the regulatory barrier is lifted and Israeli regulations are adjusted to NFPA regulations, regulatory uniformity and the process of coming on par with most of the advanced Western world will open doors to international collaboration and interaction, which will have a major contribution on the activities on the Fire Protection Division and on other activities occurring at the National Fire & Rescue Authority (e.g. potential collaboration between the Firefighting Academy and its counterparties elsewhere in the world).

ISAP plays a major role on influencing the international relations of the Firefighting Authority, and particularly, those of the Fire Protection Division. This will open a channel of communication and collaboration with leading international organizations, headed by the NFPA. For the first time since its inception, the Firefighting Authority will engage in high-quality discourse, among equals, with leading international regulators around the world engaged in fire protection, which have adopted the NFPA 101. This foundation of common regulations will allow the development of economic, commercial, and trade collaborations, as well as others. It will also include academic collaboration and collaboration on research and development, managerial concepts, means of enforcement, the establishment of think tanks on similar issues, the exchange of potential solutions, exchanges of learning delegations, peer learning, innovation, strengthening and bolstering international relations, using the resources available to foreign regulators to gather data on what has occurred in various countries, initiating joint training programs, exchanging expertise and know-how, and more. The adoption of international standards will encourage lifting import-export barriers, and uniform standardization will also lead to more competition and lower prices in the Israeli market. Moreover, ISAP and uniformity of standards among different countries will encourage new international trade agreements, economic cooperation agreements, and other initiatives meant to encourage diplomatic and commercial ties between countries that have the same regulations as Israel does.

Of course, in order to fulfill the potential embodied in the establishment of infrastructure for this international activity, the Legislation and Regulation Department will need to be given adequate resources, including more staff positions manned by native English speakers with an academic background in engineering or other disciplines, who are able to study and understand international standards and regulations to the point that they are able to conduct dialog and peer learning with foreigners. Moreover, protocols and rules and regulations will need to be written to govern international



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activity and set objectives and work plans for establishing international relationships and fulfilling their potential.

גלאי עשן מציל חיים



Annex A: Description of the Methodology

Consultations done with the public, stakeholders and subject matter experts

ISAP is a long and complex process with significant horizontal and vertical impacts on the entire Israel economy, including business owners, contractors, entrepreneurs, and more. For the general public and for stakeholders, this is a genuine revolution, underpinned by a conceptual, educational, and psychological change regarding what we had known until today about Israeli regulations on fire protection and fire safety, as well as potential savings of billions of shekels to the Israeli economy (not including the reduction of associated costs and indirect profit reaching the consumers themselves).

During the kickoff of ISAP, consultations were held with senior fire protection officials from within the Firefighting Authority and outside of it, as well as stakeholders who all possessed the relevant knowhow and experience and the ability to assess the project and contribute to the thought processes and the planning at its foundation. These consultations were held with a wide range of stakeholders, including safety consultants and fire protection experts from Israel and beyond, fire protection engineers, engineers with expertise on international standards, and specifically, NFPA standards, senior officials at the Firefighting Authority with expertise on fire protection, retired employees from the Firefighting Authority's Fire Protection Division and other fire protection units, and the owners of laboratories used by the Firefighting Authority for various standards.

These consultations help the Firefighting Authority understand the complexities of the project and plan its kickoff. They offer a holistic view of the project, with all of its stages. This, for instance, is what bolstered the notion that emphasis should be placed on the NFPA 101 when adopting international standards. Furthermore, we better understood the need to link fire protection regulations to a modern standardization system that is frequently and continuously updated, to ensure that these regulations remain relevant over time. Also, it became clear to us that adopting the international standards quickly and wisely, with as few adjustments as possible, is extremely important. Another takeaway was that we should adopt not just the content of the NFPA, but also its structure, in a way that helps us update and amend regulations from time to time, in accordance with corrections made at source.

Another point that external consultants mentioned is that adopting the NFPA will allow us to focus on the requirements and set clear, lean, and enforceable provisions, which will help the Authority ensure that fire protection standards work. Moreover, the experts mentioned that this also presents an opportunity to stop working on areas that are within the purview of other regulators (such as electricity), and it's an opportunity to work out the division of labor between the Authority as a regulator, the supervised entities, and safety consultants. Many of the consultants identified an



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opportunity to make a cultural change and place more professional responsibility on the supervised entities' engineers (currently, the Authority assumes that responsibility, or transfers it to the laboratories). In parallel, we began thinking that with regard to technical standards for products and systems (such as standardization of smoke detector and fire detector systems), alongside the adoption of international standards, in certain cases, alternative standards, such as European standards, will be adopted. This alternate standardization will provide considerable relief to the Israeli economy, reducing the costs of testing by the Israel Institute of Standards and the laboratories currently required, and it will allow us to open the Israeli economy to competition with regard to both the products and systems themselves and those testing and certifying the said systems.

When contemplating ISAP, and in light of a series of consultations with subject matter experts on fire protection, it was decided that the policy concept will be changed in the Fire Protection Division with regard to ad-hoc corrections from time to time to the Firefighting Authority's existing regulations. These corrections, which, at times, stem from an initiative spearheaded by the Legislation and Regulation Department, and at other times, from a need arising from the field (from fire protection inspectors, public inquiries, etc.), are usually done on a case-by-case basis. Therefore, even if the public's arguments are clear and correct, because of the need to make the correction urgently, it does not involve an organized process of comparing against the NFPA or other international standards. Other courses of action are not taken into consideration, no cost assessment analysis is conducted, and so forth.

When arriving at the decision to launch ISAP and the adoption of NFPA regulations, a decision was made by Maj. Gen. Firefighter Doron Levi, the Director of the Fire Protection Division (henceforth: "the Division Director"), which was also validated by the Fire Commissioner, Lt. Gen. Firefighter Dadi Simchi, calling for refraining from making any changes to the Firefighting Authority's current Israeli regulations that are not in the framework of ISAP, unless a genuine and vital need arises to make that change, and it is approved by the Division Head, or the Fire Commissioner.



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Referenced documents

The Firefighting Services Law – 1959.

The Municipal Union Law – 1955.

Firefighting Services Statutes (Powers of the Commander in Chief of Firefighting Services) – 1972.

Document on the characteristics of the commissioner's AORs, as defined by the Civil Service Commission in June of 2003.

Business Licensing Law – 1968.

Firefighting Service Statutes (Firefighting Equipment) – 1964.

Firefighting Service Statutes (Firefighting Equipment in Pleasure Domes) – 1969.

Firefighting Service Statutes (Firefighting Equipment in Residential Buildings) - 1972.

Firefighting Service Statutes (Provision of Water and Fire Hydrants) – 1971.

Government Resolution 2699 on "Improving the readiness of the home front for emergencies and disasters, and determining the budgetary resources for implementing this decision", Jan. 9, 2011.

The Firefighting Services Law – 1959.

Memorandum on the Israel Fire and Rescue Authority Law – 2011.

The Israel Fire and Rescue Authority Law – 2012.

Business Licensing Law – 1968.

Business Licensing Statutes (General Provisions) – 2000.

Business Licensing Order (Business Requiring Licenses) - 2013.

Government Resolution 1264 on "Improving and streamlining business licensing processes in the State of Israel" - February 25, 2007.

State Attorney Directive 73.2 - "Prosecution Policy on the Decision to Indict due to Offenses involving Manslaughter and Causing Injury Recklessly" - January 21, 2018.

Government Decision 3756 on "Adopting the recommendations of the report issued by the committee on socio-economic change - continued discussion (the Trajtenberg Committee Report)" - September 9, 2011.



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Government Resolution 4027 on "Streamlining and improving government regulations" - December 25, 2011.

Government Resolution 708 on "Bettering, coordinating, and improving government regulations" - August 25, 2013.

Government Resolution 2118 on "Reducing the regulatory burden" - October 22, 2014.

Government Resolution 4191 on "Increasing competition and reducing the cost of living" - January 29, 2012.

Government Resolution 4398 on "Smart Regulation: Implementation of the OECD's recommendations and amendment of the government resolution" - December 23, 2018.

The NFPA website: <https://www.nfpa.org>.

The Florida State Fire Marshal website: <https://www.myfloridacfo.com/Division/SFM/bfp>.

Rossberg, Jim, and Roberto T Leon. "Evolution of Codes in the USA." NEHRP, 2013, 12.

Public Security Ministry, Planning Division, Budgeting and Control "Assessing the Impact of Regulation (RIA) - Fire Safety in Existing Educational Structures" (December 2018).

Ministry of Public Security and National Fire & Rescue Authority, "Summary Report for Improving Regulations for 2018 - Fire Safety", clause 2.1 (2019).

Government Comptroller, "The Fire and Rescue Commission and Firefighting Authorities: Prevention of fires in high-rise structures, businesses and institutions" (2012).

Letter from the Head of the Fire Protection Division, "Fire Safety Requirements in Existing Businesses - Reducing Regulations – Commissioner's Approval – Clarification" (September 4, 2017).

Commissioner Directive 550 "Detection and Firefighting Systems", first published on January 1, 2012, last updated on March 22, 2020.

Commissioner Directive 529 - "Availability of the water supply network and the distribution of fire hydrants". Published on January 4, 2016, last updated on July 12, 2016.

Planning and Construction Law – 1965.

Planning and Construction Statutes (request for permit, conditions and fees) – 1970.

Standards Law - 1953.



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Presentation prepared by the commander of the Fire Protection and Investigation Track at the National Firefighting and Rescue Academy, entitled "2020 Annual Summary and Approval of the Training Gantt Chart for 2021" (2020).

Arrangements Law for the Israel Economy for 2021.

NFPA 101 – Life Safety Code.

NFPA13 - Standard for the Installation of Sprinkler Systems.

NFPA72 - National Fire Alarm and Signaling Code.

Israeli Standard 1596: Sprinkler system - installation

2019 data published in the statistical gazette for 2020, no. 71. The data is taken from Table 11.16 in the chapter on national accounts.

Staff paper from 2017, led by the then Director of Regulation Policy in the Public Security Ministry (Avishai Ladani, the Director of Regulation Policy), on comparing Israeli firefighting requirements with NFPA firefighting requirements for educational institutions.

Data from the Regulation Policy Division in the Prime Minister's Office.



Annex B: Details on the calculation of the estimated savings to the economy following the adoption of the NFPA standards

Assessment of the cost of firefighting requirements to the economy - planning and construction

Annual construction cost assessment:

1. The annual investment in building infrastructure in Israel is estimated at about 170 billion.⁴²
 - 1.1. Investment in residential construction – ~54% of this amount.
 - 1.2. Investment in construction for purposes other than residential (business) – ~23% of this amount.
 - 1.3. Investment in roads – ~5% of this amount.
 - 1.4. Investment in other construction work – ~18% of this amount.
2. Working assumptions: Firefighting requirements are applied to residential and business construction, but not to road construction, which account for about 5% of over construction.
3. The annual investment in construction that is under the Firefighting Authority's regulations is about 95% of the overall annual investment. This translates to 160.6 billion shekels.

Assessment of the cost of firefighting requirements, of the total construction costs:

4. Based on accepted estimates, firefighting requirements account for about 7-8% of the costs of residential and commercial construction.
5. We chose an estimate that stated that the costs of regulatory requirements from the Firefighting Authority are only about 7%, meaning that the total annual costs to the economy of firefighting requirements in Israel, in the framework of planning and construction processes, are about 11 billion shekels.

Assessment of the cost of firefighting requirements to the economy - business licensing processes

6. The total annual cost to the economy of firefighting requirements for businesses requiring licenses is:⁴³
 - 6.1. Costs of establishing new businesses: 2,232,177,849 shekels.⁴⁴

⁴²2019 data published in the statistical gazette for 2020, no. 71. The data is taken from Table 11.16 in the chapter on national accounts.

⁴³Based on a paper written by Avishai Ladani, who was in charge of regulatory policy at the Public Security Ministry in 2017.

⁴⁴Working assumption: Every year, 26,000 businesses are opened in Israel that require licensing.



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- 6.2. The current costs of all Israeli businesses: 1,280,338,158 shekels ⁴⁵
7. This means that the total annual cost to the economy of firefighting requirements for business licensing in Israel is about 3.5 billion shekels.

Assessment of the cost of firefighting requirements to the economy for assets that do not require licensing:

8. There are about 430,000 assets in Israel that do not require licensing (like educational facilities, social services facilities, defense institutions, etc.). We do not have any confirmed information on the number of new assets established each year, so we operated under the assumption that the ratio between new and old assets is identical the situation for business licensing (about 17%).
9. Furthermore, we operated under the assumption that the ongoing setup cost and maintenance cost is identical for assets requiring licenses.
10. **Consequently, the estimated cost to the economy of firefighting requirements for assets that do not require licensing is about 10 billion ILS.**

Estimate of the anticipated savings following the adoption of the NFPA standards:

11. Based on the information provided until this point, the total regulatory costs from the Firefighting Authority are estimated at about 24.7 billion shekels per year.
12. In the context of a project directed in 2017 by the then Director of Regulation Policy in the Public Security Ministry (Avishai Ladani, the Director of Regulation Policy), a comparison was made between Israeli firefighting requirements and NFPA firefighting requirements, for educational institutions.
13. The total savings following the adoption of NFPA standards will be 70% of the setup (one-time) costs, and 66% of the ongoing annual costs.
14. The potential savings, according to a conservative estimate, is that the total savings will only be 30%. Based on this assumption, the potential savings to the public is 7.41 billion shekels per year.

⁴⁵ Working assumption: There are about 150,000 businesses in Israel that require licenses (Based on data from the Regulation Policy Division in the Prime Minister's Office).