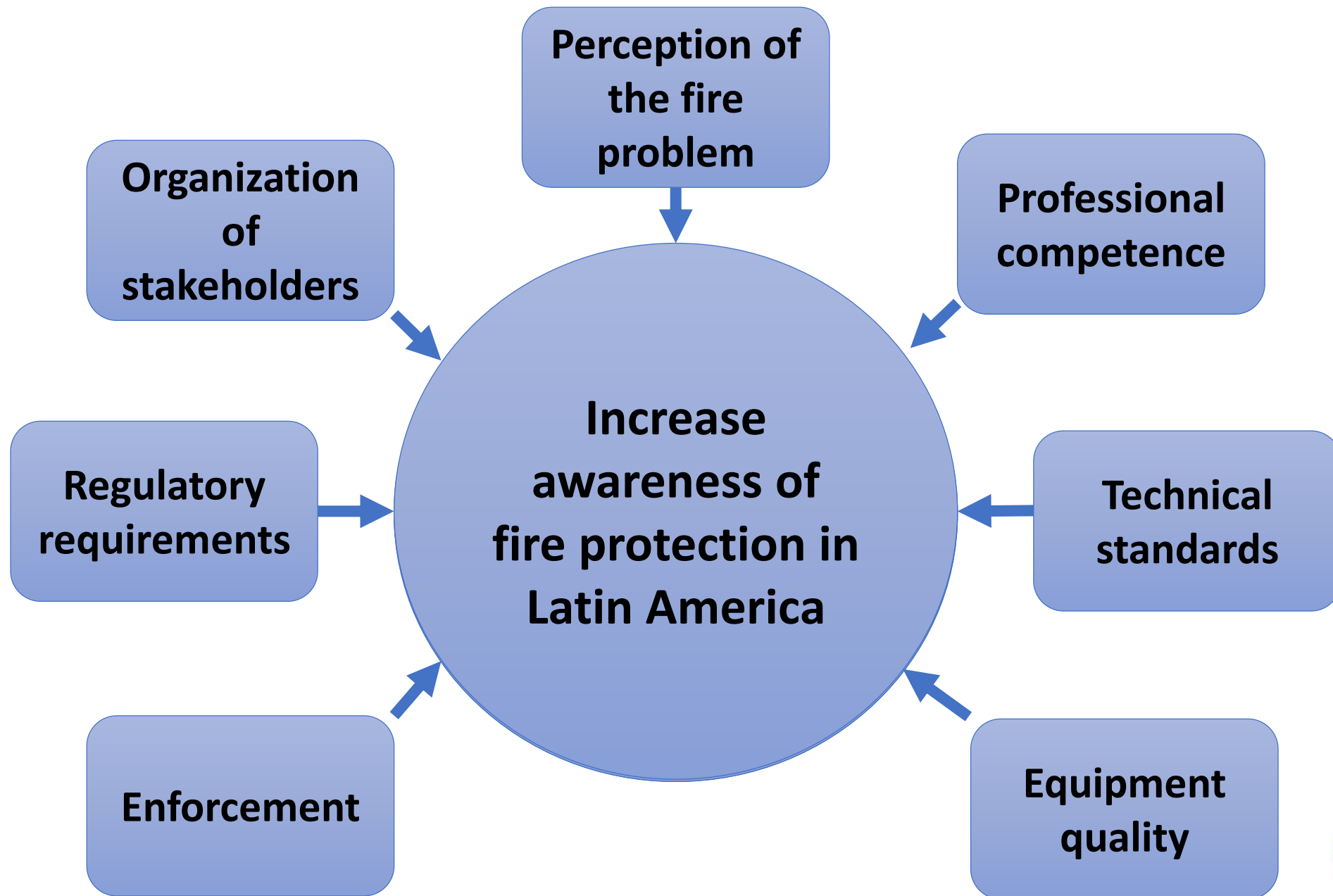




Fire protection awareness in Latin America

Marcelo Lima
Instituto Sprinkler Brasil





Perception of the problem

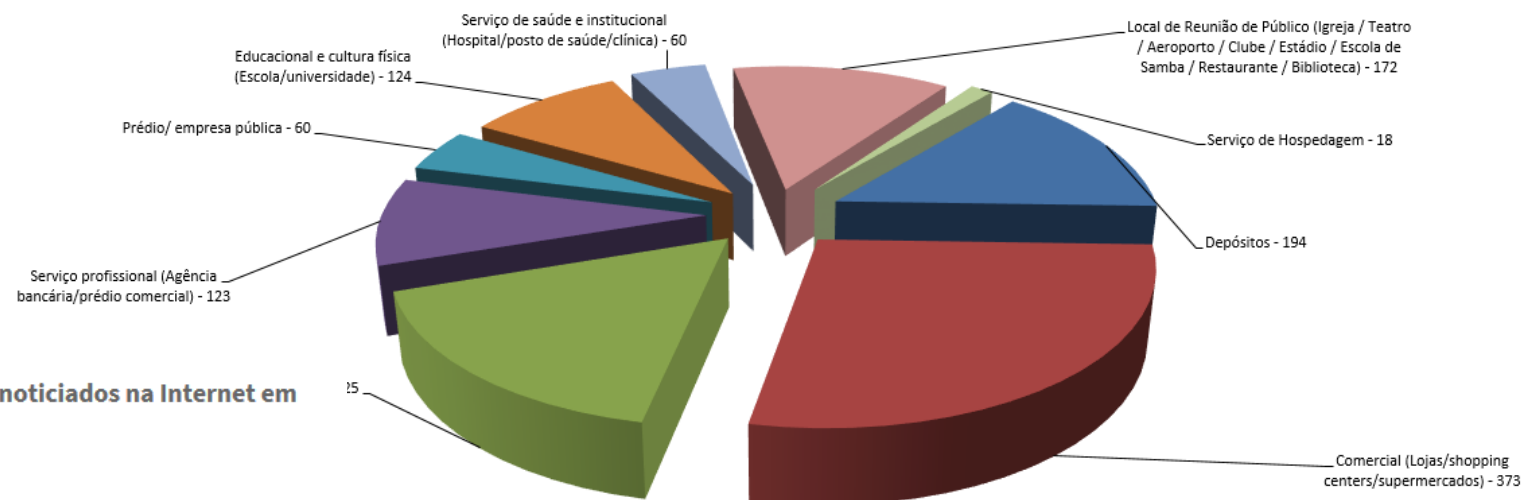
Is fire a problem in Colombia?

- Does Colombian society see fire as a problem?
- What is the social and economic cost of fire in Colombia?
- Is there an effort to explain the fire problem to the media?
- Is local fire data generated in the country?

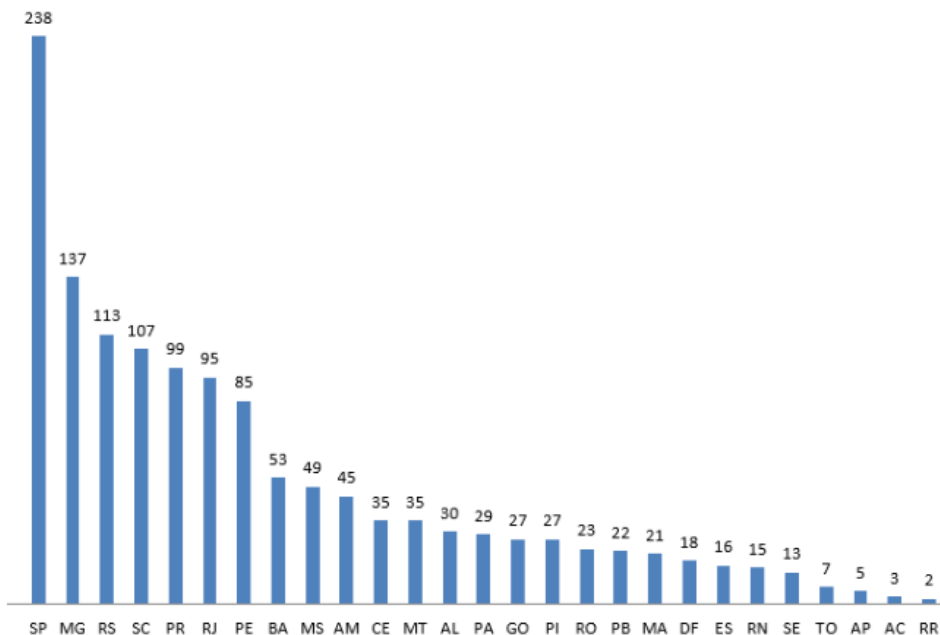
Brazilian Congressional Fire Safety Caucus

- **Project #2 - Fire Incident Reporting System**
 - > **Propose a methodology that would allow all 27 state fire departments to report fire incidents in a similar way**
 - **Number of fires**
 - **Type of occupancy**
 - **Victims**

Fires reported by the media in Brazil



Número de incêndios estruturais (exceto residenciais) noticiados na Internet em 2015 – por Estado



Source:
Instituto Sprinkler Brasil – www.sprinklerbrasil.org.br

ABSpk – Brazilian Sprinkler Association



Side-by-side demonstrations

Organization of Stakeholders

Who are the main stakeholders and how well are they organized?

- **Sectors that have an economic interest in fire protection**
- **Sectors that have an institutional interest in fire protection**
- **Sectors that oppose new fire protection requirements**

Supporting entities



- Legislation
- Public education
- Fire data
- Technical standards



- Sprinkler industry interests
- Professional training
- Professional certification

Brazilian Congressional Fire Safety Caucus



FRENTE
PARLAMENTAR
MISTA DE
SEGURANÇA
CONTRA INCÊNDIO

Parliamentary Caucus Executive Board

- 5 House representatives
- 3 Senators

Parliamentary Board Advisory Board

14 governmental and private organizations

- Senasp (Secretariat of Public Security)
- Sedec (Secretariat of Civil Defense)
- Ligabom (Fire Chiefs Association)
- Inmetro (National Accreditation Body)
- ABNT (National Standards Organization)
- IPT (Fire lab)
- CONFEA (Engineering Council)
- AVTSM (Association of Families of Victims of the Santa Maria Fire)
- ISB
- ABINEE (Alarm and detection association)
- ABSpk (Brazilian Sprinkler Association)
- UFPE (University of Pernambuco)
- GSI-USP (University of São Paulo)
- FenSeg (Insurance Federation);



Professional Competence

What is the competence level of fire protection professionals?

- **Engineers and architects have adequate fire protection training?**
- **Are there instructors to educate new professionals?**
- **Is technical literature produced in the country?**
- **Is there fire protection research in universities?**
- **Do enforcers and AHJs receive adequate training?**

Professional Competence

- **Brazilian Congressional Fire Safety Caucus**
 - > **Project #4 – Fire Engineering**
 - Create the conditions to have Fire Protection Engineering accepted as an “official” engineering title
 - Government financing bodies: recognize Fire Safety as a specific area of research
 - Have Engineering Councils (regulate engineering specialties) include Fire Safety Engineering

Professional Competence

■ ISB Awards

■ Winners:

- > 2014 – Common mistakes in sprinkler system design
- > 2015 – Proposal for acceptance of fire protection systems
- > 2016 – Analysis of reliability of sprinkler systems in São Paulo
- > 2017 – Proposal for a product certification program

■ Prizes

- > Visit to Research Campus
- > Cash prize - ~USD3000
- > Publication of 1st place work



Professional Competence



HOME ISB BIBLIOTECA PRÊMIO SPRINKLER LEGISLAÇÃO IMPRENSA CONTATO

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AGENDA
NEWSLETTERS

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TODAS AS PUBLICAÇÕES



Inspeção Predial de Sistemas de Chuveiros Automáticos
PRÊMIO ISB



Simulação de Incêndios por Fluidodinâmica Computacional
PRÊMIO ISB



Instalação e Dimensionamento de Sprinklers
PRÊMIO ISB



Aceitação de Sistemas de Sprinklers
PRÊMIO ISB



Sprinklers: Conceitos básicos e dicas excelentes para profissionais
PRÊMIO ISB

Book distribution:

Paper copies (since 1st edition): 1660

Downloads (Jan-Jun 2017): 1035

ABSpk – Brazilian Sprinkler Association



**CBSpk – Brazilian Sprinkler Conference
Guaruja 2014 and Rio 2016**

ABSpk – Brazilian Sprinkler Association

- **Professional Training**
 - > Sprinklers – NFPA 13
 - > Fire Pumps – NFPA 20
 - > Inspection and Maintenance – NFPA 25
- **Courses transferred by NFSA, with local instructors**
- **Outreach**
 - > Training: 220
 - > Side-by-side: 300
 - > Conferences: 480



Regulatory Issues

Are there adequate fire codes and building codes?

- **Is there a functional fire code/building code that requires the use of sprinklers?**
- **Are the requirements technically correct?**
- **Are codes regularly revised, in a process subject to public comments?**
- **Are code requirements perceived as excessive, adequate or too lax?**
- **Do code officials understand fire protection?**

Regulatory Issues

■ Model National Fire Code

- > Produce a model document that can be adopted by the 27 states
- > Based on NFPA/IBC concept and World Cup Book of Recommendations



Regulatory Issues

- **Bill 2020 - Legislation proposed in response to Kiss Nightclub fire**
- **Main proposals:**
 - > Accountability
 - > New legal attributions
 - > Criminalization in case of lack of fire protection



Technical Standards

Are there adequate technical standards?

- **Does the national standards body produce local fire protection technical standards?**
- **Are the local professionals involved in the technical standard writing process?**
- **Is there a formal agreement with international standards organizations?**
- **Are these standards referenced in the codes?**

Technical Standards

- **Brazilian Technical Standards Association**
- **Finished new standard**
 - > **Fire Pumps for Automatic Fire Protection Systems**
- **Completed review of existing standard**
 - > **ABNT NBR 16400 – Testing of sprinkler heads**
- **New standard (Aug '17)**
 - > **Sprinkler protection of aerosol storage (NFPA 31B/FM Data Sheet 7-31)**

Enforcement

Are code requirements effectively enforced?

- **Do the enforcers have technical knowledge on fire protection?**
- **Do the enforcers have tools and means to enforce fire protection measures?**
- **Who enforces fire protection measures, and to what extent?**
- **Is there accountability in the process?**

Enforcement

- **Distance Learning for Firefighters**
 - > **Objective: Offer distance-learning training on basic sprinkler technology state fire departments**
 - > **Potential audience: 70,000 firefighters in 27 states**
 - > **First public/private program at SENASP – being used as a model**
 - > **Online 4th Q 2017**

Rede EaD - SENASP

SECRETARIA NACIONAL DE SEGURANÇA PÚBLICA



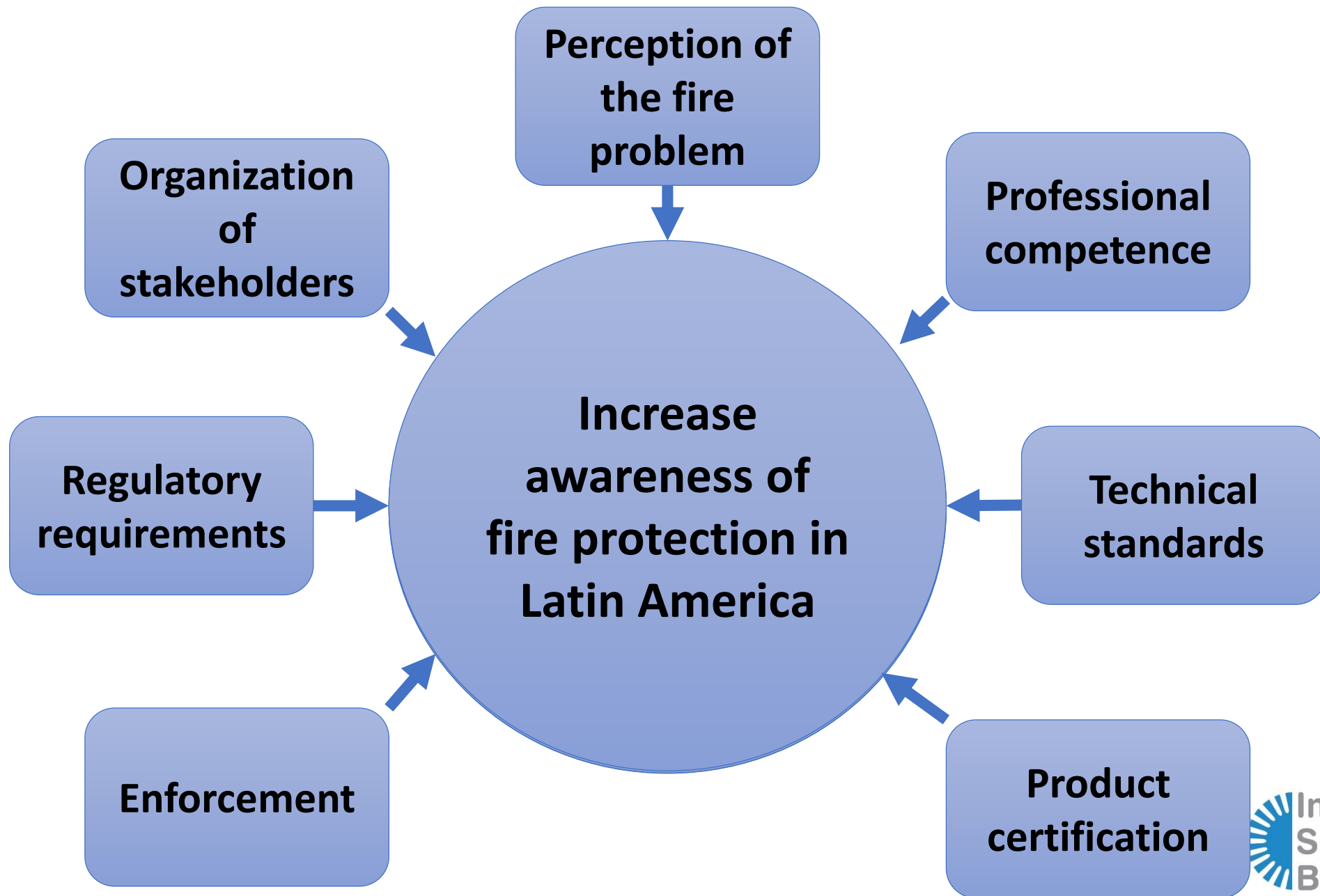
Product certification

What is the quality level of fire protection equipment used in the country?

- **Is there a legal requirement to use certified equipment?**
- **How do codes and AHJs mandate the use of certified products?**
- **Do local requirements differ significantly from international requirements?**

Product Certification

- **Project #3 - Product Certification**
 - > **INMETRO cannot produce a credible fire protection certification scheme**
 - > **Require in legislation following the US model.**
 - > **Proposal in the São Paulo Fire Code revision (2017) and in the new Model National Fire Code**
- Art 21 - The State Fire Service may require certification, or other mechanism of conformity evaluation, of products and services related to fire safety in buildings and risk áreas, provided by certification bodies accredited by INMETRO, confirming that they meet national technical standards.(...)
- § 2º - Products and services certified according to other internationally recognized technical standards and certification bodies may be accepted.





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