



Berlin, September 12th 2019: E-Commerce and ICT services in Italy

Requirements for the ICT sector in Italy: focus on cybersecurity

Marco R. A. Bozzetti, President of AIPSI and CEO of
Malabo srl



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Introduction



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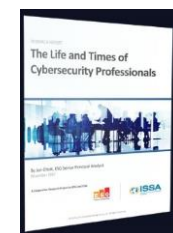
About me

- Degree in Electronic Engineering at the Polytechnic University of Milan
 - Position of great responsibility in leading manufacturing companies such as Olivetti and Italtel, and consulting companies such as Arthur Andersen Management Consultant and Gea/Gealab
 - First CIO of the whole ENI Group (1995-2000).
 - EITO scientific creator and curator
 - Active in the '70-80s in standardising the OSI model of ISO
 - Various certifications and Examiner in AICA for eCF (EN 16234)
 - Publication of more than 200 books and articles on ICT
- Founder and owner of **Malabo Srl** since 2001
 - ICT management consulting company, with a well-established network of senior experts and specialised companies
 - The main purpose of Malabo is to create a measurable value for the client by appropriately balancing technical, organizational and business aspects
 - In order to guarantee a real transfer of know-how, Malabo provides the client with its own methods and informatic tools, the same adopted for the consulting intervention

AIPSI, Associazione Italiana Professionisti Sicurezza Informatica



- Apolitical, nondenominational and no profit association → only natural and non-legal persons may be enrolled.
- **Italian Chapter of ISSA**, Information Systems Security Association, (www.issa.org) → the largest nonprofit organization of ICT Security professionals in the world.
- **Main objective of AIPSI** : helping its members (**natural persons**) in their professional grow → skills → career and business grow
 - **ISSA Journal**
 - Surveys and reports, such as
 - **ESG ISSA Survey** “The Life and Times of Cyber Security Professionals”
 - **Yearly OAD Survey** (see <https://www.oadweb.it>)
 - **Report on female professionals in the cybersecurity sector in Italy (CSWI)**



OAD, Osservatorio Attacchi Digitali in Italy (<https://www.oadweb.it/>)



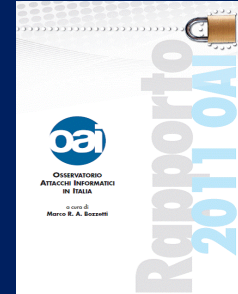
- About it
 - Web survey analysing **intentional digital attacks** on computer systems in Italy
- Objectives
 - Provide **information** on the **real situation** of digital attacks in Italy;
 - Reference data and help for the ICT Risk Analysis
 - Creation of **an information security culture in Italy** → especially among top management decision-makers of companies
- Tasks
 - Annual **survey**
- How
 - **Rigour, transparency, correctness, absolute independence**
 - Strict **anonymity** for respondents to questionnaires
 - **Collaboration** with numerous Associations (Patrons)
 - Financial help from Sponsors in order to cover some costs of the whole survey

Covers of the OAD-OAI Reports

2019



11 consecutive years of surveys on intentional digital attacks in Italy



The 2019 OAD questionnaire is still available (until the end of September 2019)



- If your company has branch offices in Italy, fill in the questionnaire (completely anonymous):

<https://www.oadweb.it/limesurvey/index.php/799974?lang=it>

- Word of mouth to complete the questionnaire to your Italian interlocutors: the more answers we will get, the more authoritative and detailed the survey will be.





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Cybersecurity: the situation in Italy



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Estimates of the cybersecurity market in Italy in 2018

growing at a **double-digit rate**, with different estimates in the various analysis, depending on what is being taken into account.

Some examples:

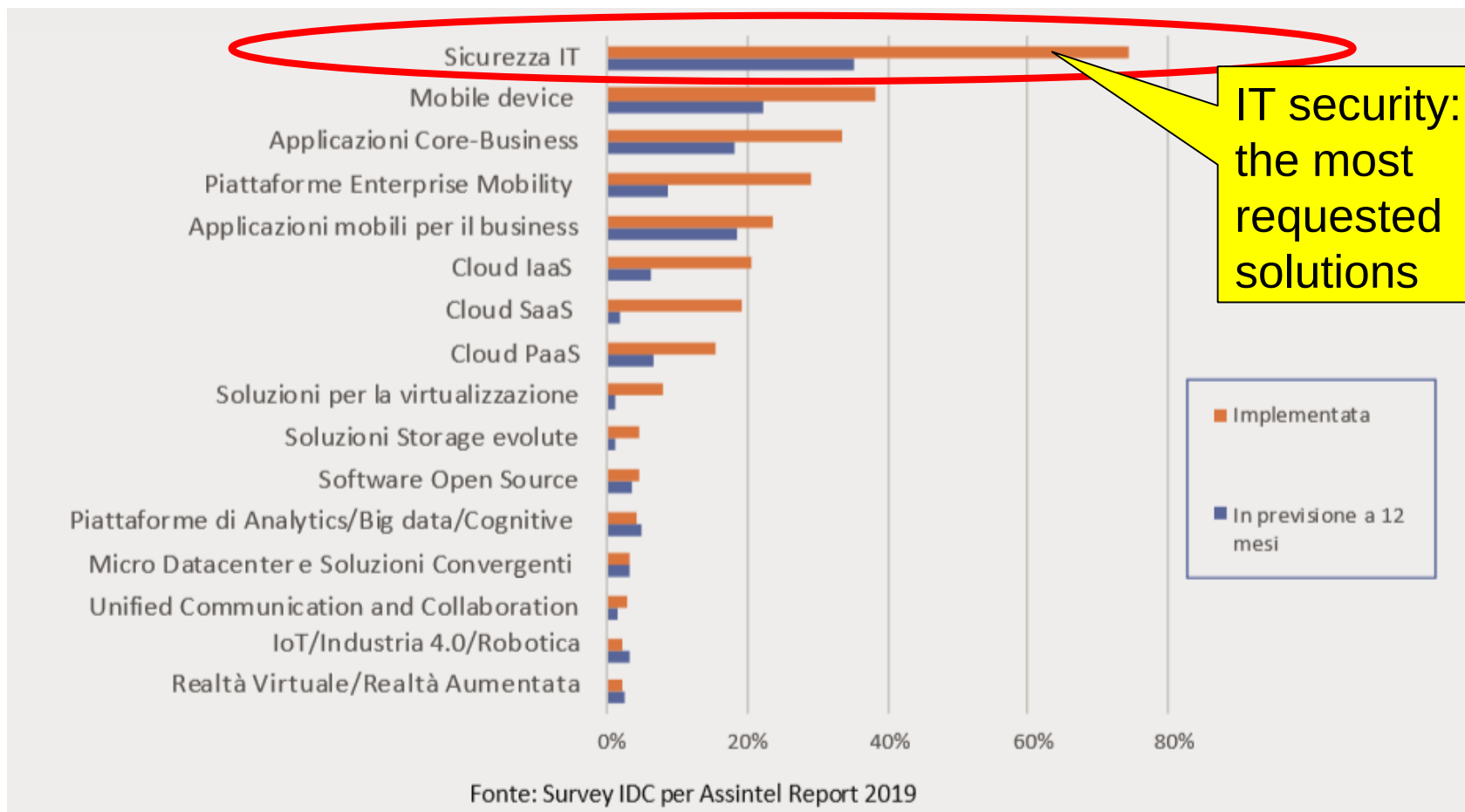
1. **Assinform (preview 2019):** cybersecurity **+12,2%**
2. **Assintel (IDC):** Cybersecurity Software Estimates

(Milioni di €)	2017	2018	2019	18/17	19/18
Security Software	363	391	420	7,6%	7,4%

3. **Observatory Information Security & Privacy of the School of Management at the Polytechnic University of Milan:**
About **1, 2 billions €**, with +9% than in 2017, that was +12% than in 2016
75% of this total expenditure is made by large companies/bodie

4. **EY Global Information Security Survey 2018-19:**
Estimated at about 1, 5 billions €

Assintel: Technological solutions implemented and/or planned in 2019



The size (# employees) of companies and public bodies in Italy

Latest ISTAT data for companies:

- Up to 9 employees: **4.180.870**
- From 10 to 49: **184.098**
- From 50 to 249: **22.156**
- 250 and more: **3.787**

95,22% of the total

PMI: 99,91% of the total

Central and local public administrations:

- About **55.000** → mostly small to very small in size

The main shortcomings in cybersecurity measures in Italy

The various OAD reports and other surveys converge, even over time, to highlight:

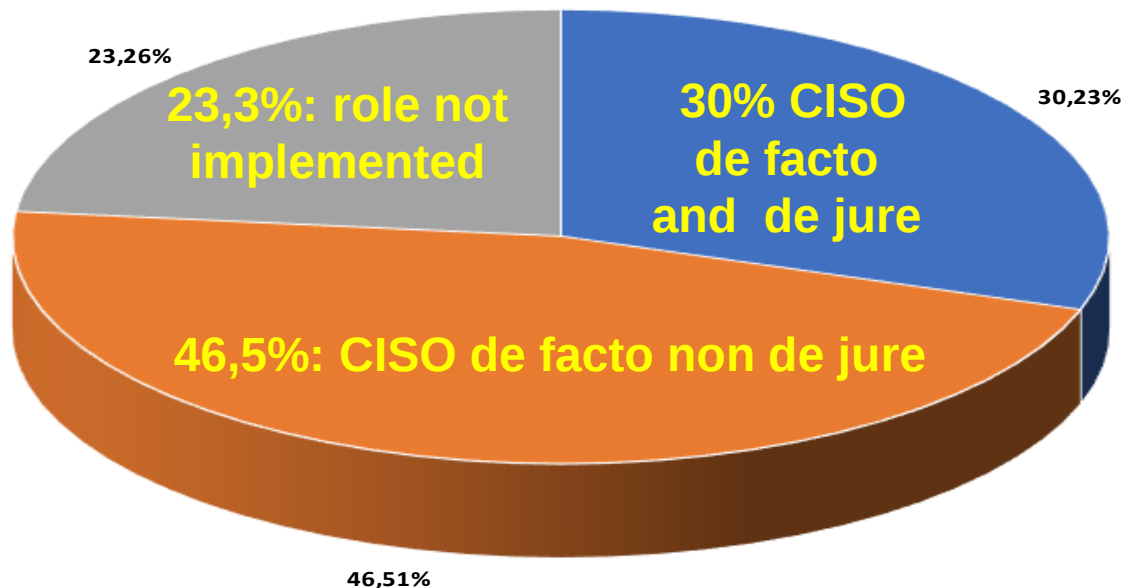
- **Delays in digital transformation**
- **Lack of awareness and expertise** of ICT systems, in particular for the cybersecurity
- **Lack of training**
- **Lack of basic technical and organisational measures**
- **Non-definition of responsibilities**
- **Lack of policies and organizational procedures**
- Dependence **on suppliers**, in particular for **SME**
- **Lack of an architectural approach** (lack of security by design) and a **continuous process** for cybersecurity management
- **Lack of centralized monitoring of the whole informatic system and of its security**

The persisting **problem** in Italy of the culture of ICT and its security

- Most of the Italian companies are **very small in size**
- **ICT and Cybersecurity** are considered as a **commodity**
- **ICT** is a **strategic asset** for only a **few companies**
- **Digital security** is considered very **technical** and **almost incomprehensible** from the top management
- Cybersecurity is often considered as driven by **suppliers** to do **their business** (ex:they create the malware, and then sell the anti-malware.)
- In SMEs → normally **no competence on ICT** and on **cybersecurity** → it is necessary/convenient to **outsource** them..

OAD 2018: CISO in the organization of cybersercurity

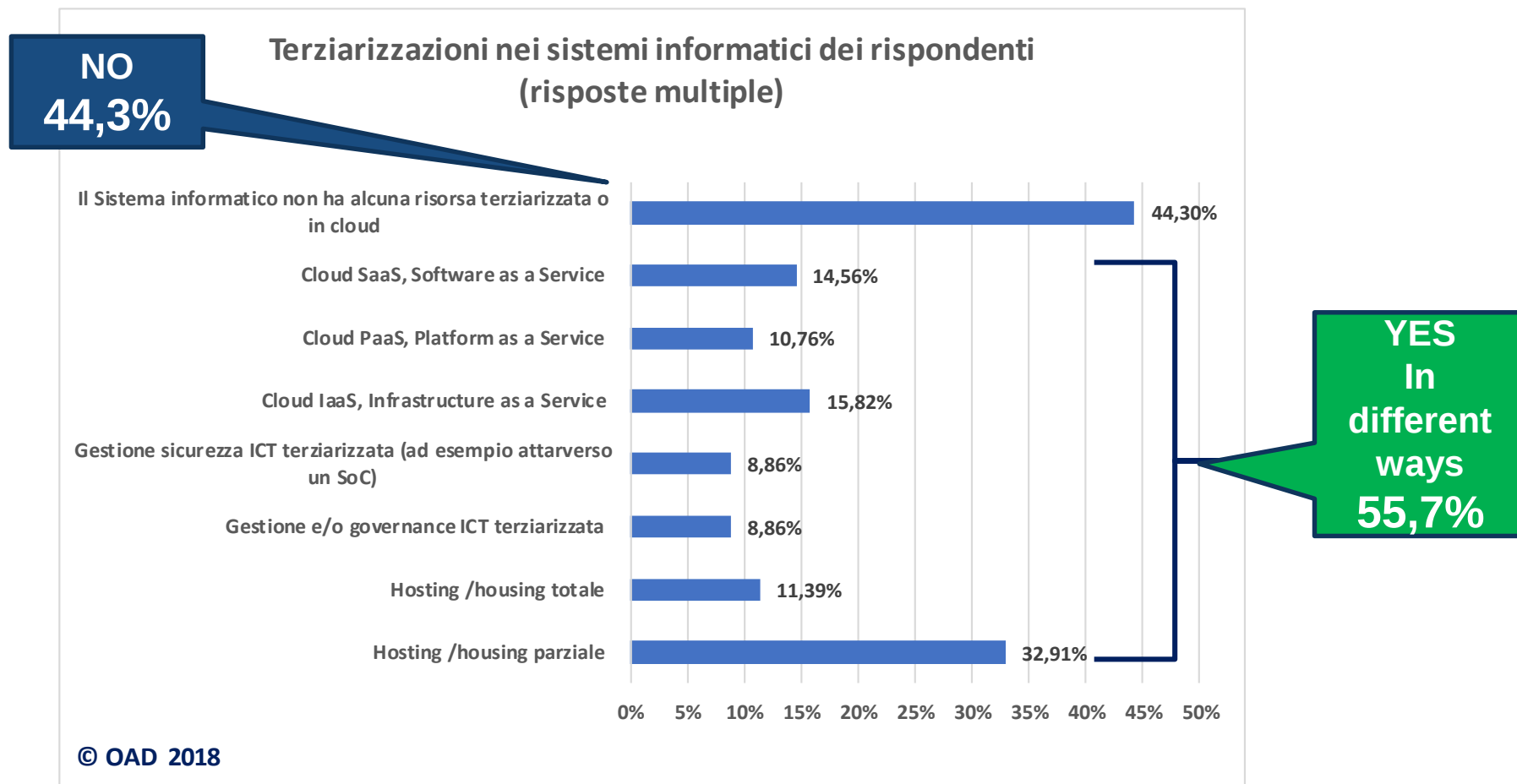
Il ruolo del Responsabile della sicurezza digitale, CISO, nella organizzazione dell'azienda/ente dei rispondenti



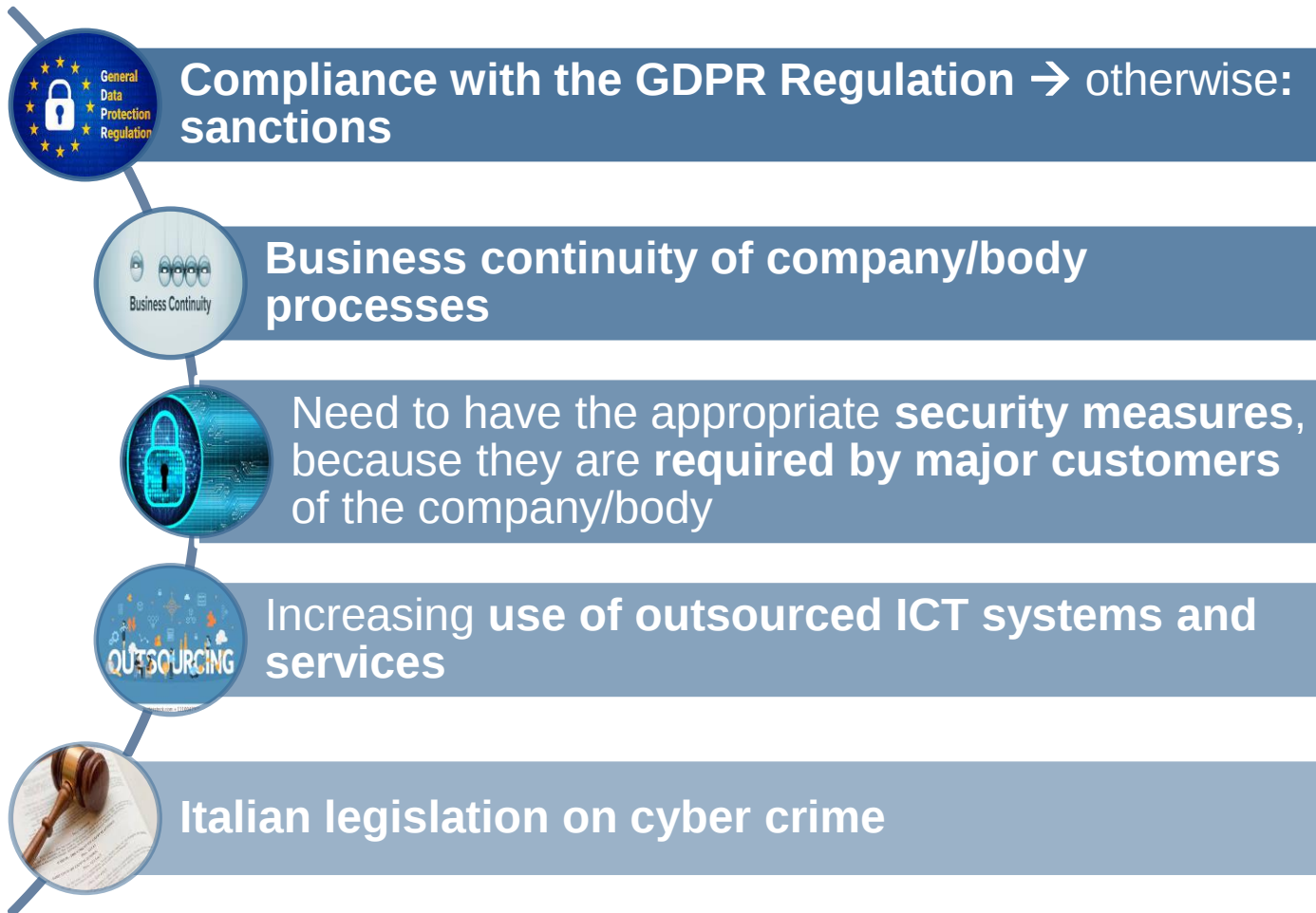
- Ruolo CISO definito formalmente
- Ruolo CISO non definito ma di fatto espletato
- Ruolo CISO non definito e non espletato

© OAD 2018

OAD 2018: Outsourced solutions, including the cloud



The main leverage factors for the growth of digital security in Italy



How many companies in Italy do business with cybersecurity?



Almost all the **consulting** firms, **business services** firms and **ICT** companies

This **confuses** and **disorients** potential **customers**



End of 2017 – beginning of 2019 → the Italian companies offering services in the field of cybersecurity **increased by more than 300% → from 700 to 2,800 units.** (Unioncamere-InfoCamere)





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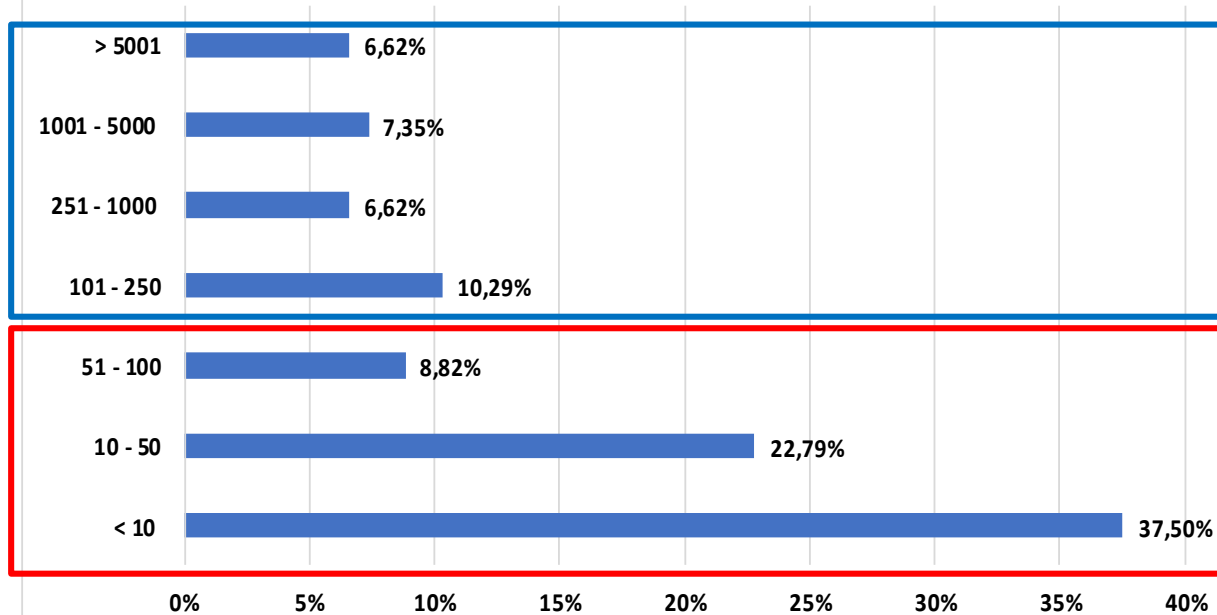
Digital attacks and security measures in Italy since the 2018 OAD survey



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OAD 2018: Respondents by company/body size

Distribuzione dei rispondenti per dimensione della loro Azienda/Ente per numero di dipendenti



SMEs nearly
80% of
respondents

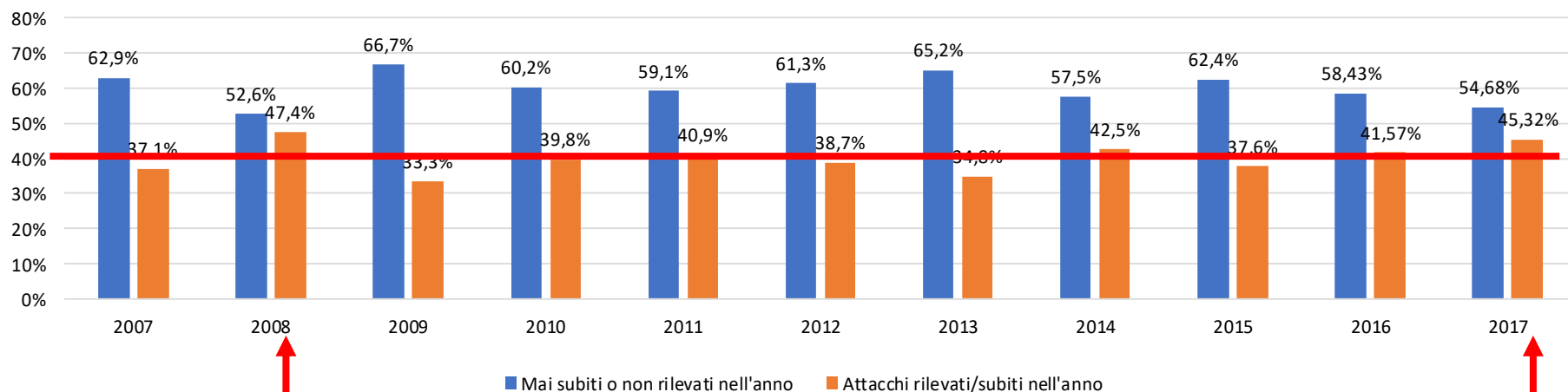
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OAD 2018 well represents the **Italian reality** consisting mainly of **small and very small organizations**

2007-17: attacks detected by OAD-OAI respondents (only as a trend, not statistics)

Confronto della rilevazione percentuale di attacchi dai rispondenti alle indagini OAD-OAI negli anni 2007-2017

(valido solo come indicatore del trend, non statisticamente)

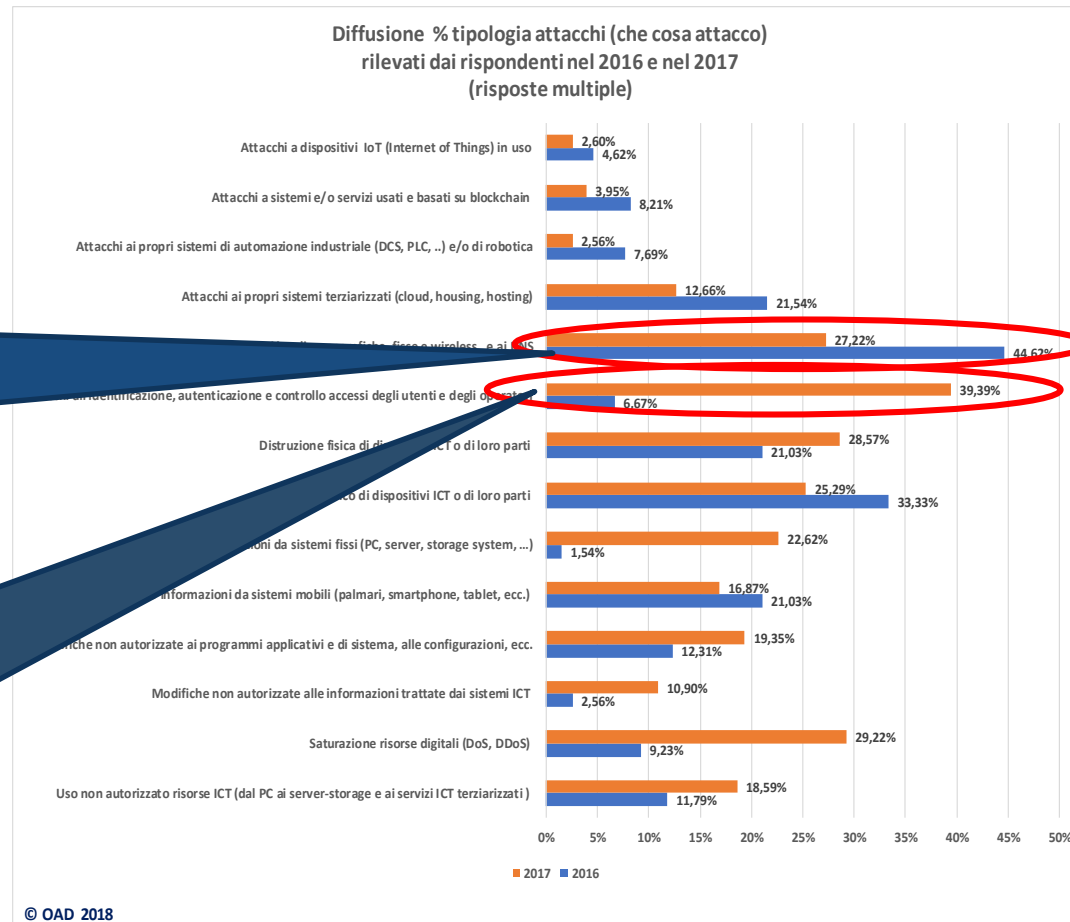


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OAD 2018: Diffusion of the type of attacks detected 2016-17

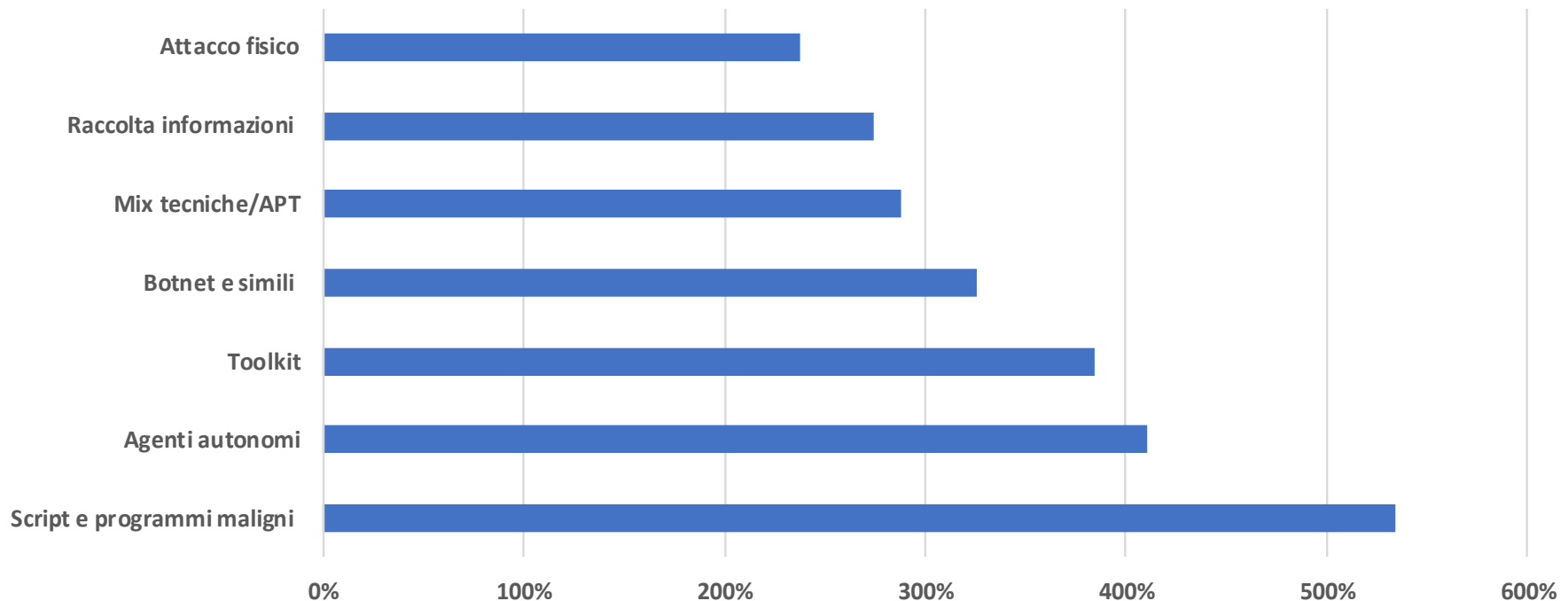
2016
Attacks to
networks
44,62%

2017
Attacks on
access
controls
(IAA)
33,39% risp.



OAD 2018: dissemination of attack techniques 2017

Diffusione tecniche di attacco (come) nelle varie tipologie (che cosa) di attacco rilevate dai rispondenti nel 2017



Queste perecentuali sono solo un indicatore e non hanno alcun senso statistico pur se indicati come %

© OAD 2018

OAD 2018: Postal Police data - 1

C.N.A.I.P.I.C. Italian Center for ICT crime and protection of critical infrastructures

Protezione strutture critiche	1 gen – 31 dic 2017	1 gen – 31 dic 2016	Differenza %
Attacchi rilevati	1032	844	22,27%
Alert diramati	31524	6721	369,04%
Indagini avviate	72	70	2,86%
Persone arrestate	3	3	0,00%
Persone denunciate	1316	1226	7,34%
Perquisizioni	73	58	25,86%
Richiesta di cooperazione internazionale in ambito High Tech Crime G8 (Convenzione Budapest)	83	85	-2,35%

Investigations/attacks
6,89%

Investigations/attacks
8,29%

Arrests/notifications
0,23%

Arrests/notifications
0,24%

OAD 2018: dati Polizia Postale - 2



Financial Cyber Crime

Financial Cyber Crime	1 gen – 31 dic 2017	1 gen – 31 dic 2016	Differenza %
Transazioni Fraudolente Bloccate in €	€ 20.839.570,00	€ 16.050.812,50	29,84%
Somme Recuperate	€ 862.000,00	=	
Arrestati	25	25	0,00%
Denunciati	2851	3772	-24,42%

**Arrests/
complaints
0,88%**

**Arrests/
complaints
0,66%**

Cyber Terrorismo

Cyber Terrorismo	1 gen – 31 dic 2017	1 gen – 31 dic 2016	Differenza %
Arrestati	4	2	100,00%
Denunciati	18	9	100,00%

**Arrests/
complaints
22%**

**Arrests/
complaints
22%**

Digital security (traditional) measures

TECHNICAL MEASURES

- Comprehensive architecture of digital security measures, integrated with the entire architecture of the information system
- Physical countermeasures
- IAA, Identification, Authentication, Authorisation measures
- Technical digital security countermeasures, at the level of local and geographical networks
- Technical countermeasures for the logical protection of individual ICT systems
- Technical countermeasures for the protection of applications
- Countermeasures for data protection

ORGANISATIONAL MEASURES

- Organisational structure, roles, competences, certifications, strict separation of roles with Third Parties
- Organisational policies and procedures
- Digital security contracts and clauses with Third Parties (GDPR should help!!)
- Awareness digital security
- Auditing

GOVERNANCE MEASURES

- Digital security control, monitoring and management systems
- Incident Management
- Disaster Recovery (DR)



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New cybersecurity trends



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News for digital security (non-exhaustive list)

Innovations or consolidation of **techniques** that are really beginning to consolidate and spread:

- **New logics** and **authentication techniques** : out of band, passwordless, etc.
- **New logics** and **authorisation techniques** : Diameter, NGAC, NISTIR 8112, etc.
- Artificial intelligence (AI), expert systems, machine learning
- **Behavioural analysis** of systems and users : AI, bayesian logics, etc.
- Increasing **integration** between **security** and **safety** in the field of *cyber physical system*
- Increasing **integration and innovation** in **monitoring** and **control systems**
- **New logic** and **development environments** sw: **DevOps**, leaning/agile programming, etc..
- **Blockchain**: uses outside of crypto-currencies, predominance of private (closed) solutions

New Organisational and regulatory items

ORGANISATIONAL LEVEL

1. ITIL 4
2. COBIT 2019
3. Lack of skills and awareness on digital security
4. Growth in outsourcing
5. Cybersecurity strong impact on the organisational structure

EUROPEAN AND ITALIAN REGULATORY LEVEL

1. EU Directive 2019/881 called CyberSecurity Act completing the EU Directive 2016/1148 called NIS, Network and Information Security
2. Increasing impact of the Guarantor's actions on GDPR compliance



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First conclusions



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Successfully enter the Italian cybersecurity market



Italian market → **saturated** with **suppliers** and **providers**
→ **but** many with **rough** skills



Little culture and **awareness** of **cybersecurity** but a lot of **prevention** and **suspicion** (except for a few large organisations)



Existing **regulations** → considered as **bureaucratic constraints**

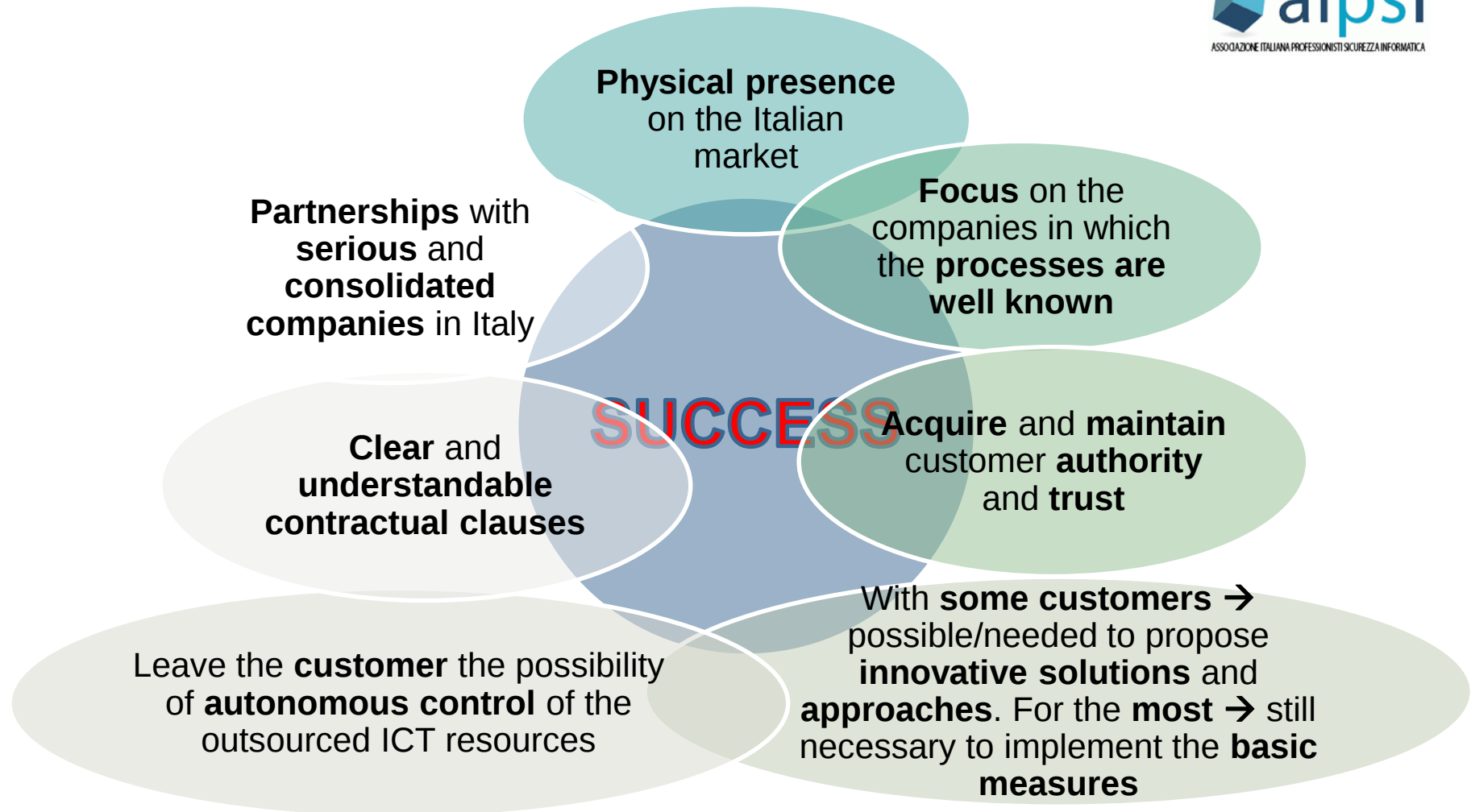


Necessity to **leverage** the **role** of **cybersecurity**



Business opportunities → both as **product** and **solution provider** and as **outsourced service provider** → also for **awareness-raising** and **training services**

Critical success factors





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Vielen Dank für Ihre Aufmerksamkeit

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<https://www.aipsi.org/>

<https://www.oadweb.it>

<https://www.malaboadvisoring.it>



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