IoT Conference 2023

Potential for IoT and its standards in CNA business domains

Presented by:

CNA

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What CNA is…

▶ "National Confederation of Craftsmen and Small and Medium Enterprises"

▶ Founded in 1946

▶ 620k member companies (employing 1,2M+ people)

▶ 47 trade categories

▶ Present in all (107) Italian provinces

▶ 19 Regional CNAs and 95 Territorial CNAs

▶ 7000 employees, active in the nearly 1000 offices

▶ CNA is the largest representative association distributed throughout the territory

…and what CNA does

▶ CNA has its own vision of economy, industrial development, society

▶ Taking that into account, it represents and protects the interests of micro, small and medium enterprises against regional, national and global challenges…

▶ …in the sectors of manufacturing, construction, services, transportation, trade and tourism, small and medium industries, and in general the business world

CNA trades

- **CNA Agro & Food**
  - Agriculture
  - Pasta Makers
  - Confectioners and Bakers
  - Beverage Producers
  - Catering
  - Food Production
- **CNA Artistic and Traditional Craftsmen**
  - Restorers
  - Ceramists
  - Artistic Metalworking
  - Goldsmiths
  - Artistic wood, glass and marble working
- **CNA FITA**
  - Goods transport
  - Taxis
  - NCC buses
  - NCC cars
- **CNA Construction**
  - Building trade
  - Stone and other building materials

- Cleaning and pest control
- **CNA Installation and systems**
  - Electrical
  - Electronics
  - Thermohydraulics
  - Refrigeration technicians
  - Lifts and Fire protection systems
  - Home appliance repairers
- **CNA Federmoda**
  - Fashion Chain
  - Fashion Textiles and Clothing
  - Footwear, Leather Goods and Fur Fashion
  - Made-to-measure fashion
- **CNA Production**
  - Mechanics
  - Wood and Furniture
  - Nautical
  - Glass/Rubber/Plastics
  - Windows and Fixtures
- **CNA Wellness and Health**
  - Hairdressers

- Beauticians
- Health (Podiatrists, Optometrists)
- Dental Technicians (SNO)
- **CNA Community Services**
  - Mechatronics
  - Body shops
  - Tyre shops
  - Dry cleaners
  - Bathing Establishments
  - Garden and green operators
- **CNA Communication & Advanced Tertiary Sector**
  - Photography and Video
  - Communication and Printing
  - Publishing
  - Digital technologies

- Many of these business activities are legacy trades
- However, the pervasive nature of IoT is making them increasingly dependent on IoT innovation

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CNA trades with IoT potential

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Examples of IoT verticals

Smart Agriculture

Precision Farming
Efficient Resource Management
Crop Monitoring and Disease Detection
Automation and Remote Monitoring
Livestock Management

Smart transport & logistics

Fleet Management and Vehicle Tracking
Driver and Passenger Safety
Predictive Maintenance
Payment and Fare Systems
Passenger Experience and Entertainment
Energy Efficiency and Emissions Monitoring
Intelligent Dispatching and Routing
Customer Feedback and Reviews

misc

Supply Chain Optimization
Data-Driven Decision Making

Smart Photography, Video, Communication, Printing, Publishing

Smart Content Delivery
Real-time Analytics
Print Optimization
Interactive Experiences
Digital Rights Management
Audience Measurement and Feedback

Some success factors for a technology standard

- **Benefit vs cost ratio** (B/C)
  - How complex?
  - What can I do if I adopt it, which I can't do without?
- **Progressivity** (P)
  - Can I adopt just part of the standard, and still gain some benefits?
- **Business popularity** (BP)
  - Adoption in one or more business domains

These factors depend a lot on the potential adopters and on the business domain conditions

Valid for OneM2M, SAREF, NGSI-LD, etc.

Success factors vs potential adopters

- What's the innovation capacity of the adopters? (B/C, P)
  - The company size matters
- How strong and demanding are the requirements of the specific vertical?
  - Are there any simpler solutions that would do the trick? (B/C)
- How fragmented is the business domain?
  - How big/dominant are the stakeholders in the value chain?
  - E.g. a point of entry in a value chain is the adoption of a standard by the largest stakeholder

Worldwide conditions vary greatly: e.g. EU, US, Japan, South Korea, China

Specific conditions in the EU (and Italy)

- Company size
  - Average size in the US (22 heads) > EU (4,9) > Italy (3,6)
  - Of course, many other parameters should be considered
    - E.g. size distribution, overall economy % per company category, etc.
- In summary, the distribution is strongly skewed towards SMEs in the EU (and Italy in particular)
  - 99% of EU companies are SMEs (99,9% in Italy)
  - 56% of EU economy is produced by SMEs (70% in Italy)
  - 67% of EU employees work in SMEs (81% in Italy)
- Caused by several issues (economic structure, market dynamics, regulatory environment, cultural factors)
- The resulting conditions are
  - Market and value chain fragmentation (often no big stakeholder to be used as an entry point for the adoption of a standard)
  - Small $\Rightarrow$ Limited innovation capacity

SDO collaborating with business associations to fix this?

- If it's difficult to convince individual companies, try to talk to their association

- Where a business association cannot help
  - Market size and fragmentation
  - Regional differences

- Where a business association could somehow help
  - Limited innovation capacity
  - Regulatory factors

- Where a business association could definitely help
  - Awareness and education
  - Cultural factors

CNA actions to support tech innovation

- Education and awareness
- Training and Workshops
- Networking and Matchmaking
- Industry-Specific Guidelines
- Advocacy and Representation

Potential for ETSI & CNA collaboration

- Awareness and Education
  - Engage with vertical business sectors to promote the benefits of ETSI IoT standards for them
  - Showcasing successful use cases, demonstrating interoperability benefits, and highlighting the potential cost savings and efficiency improvements associated with standardized IoT
- Government Support and Policies
  - Engage with government bodies, regulatory agencies, and policymakers to advocate for the adoption of ETSI IoT standards
  - Encourage the development of policies and regulations that promote interoperability and incentivize the use of standardized IoT frameworks

Thanks!
Any questions?

Nicola Ciulli

n.ciulli@nextworks.it