Paolo S. Crosta

He got his degree in Electronic Engineering.
He was responsible for different R&D departments, including HW & SW Platform Unit.
Currently he is responsible for Innovation Lab, Research Programs & R&D&I Project Funding within the Marketing, Innovation & Communication Unit.

He coordinates research and innovation activities on innovative fixed and mobile network architectures (5G and beyond), Cloud Computing, NFV, SDN, Internet of Things, Big Data, Quantum Communication, Blockchain, Cybersecurity, Machine Learning and Artificial Intelligence.
He has matured relevant expertise in the management area as well, especially in innovation management, Intellectual Property Rights, problem solving, team building, team management, project management and agile methodologies.
He is a Certified Scrum Product Owner.

He is Core Group member of EU Celtic-Next Eureka Cluster and Board of Directors member of Consorzio Milano Ricerche.
He acts as technical reviewer of scientific and standardization associations (IEEE, ETSI) and as member of Technical Programme Committees for International Conferences and Workshops on ICT topics.
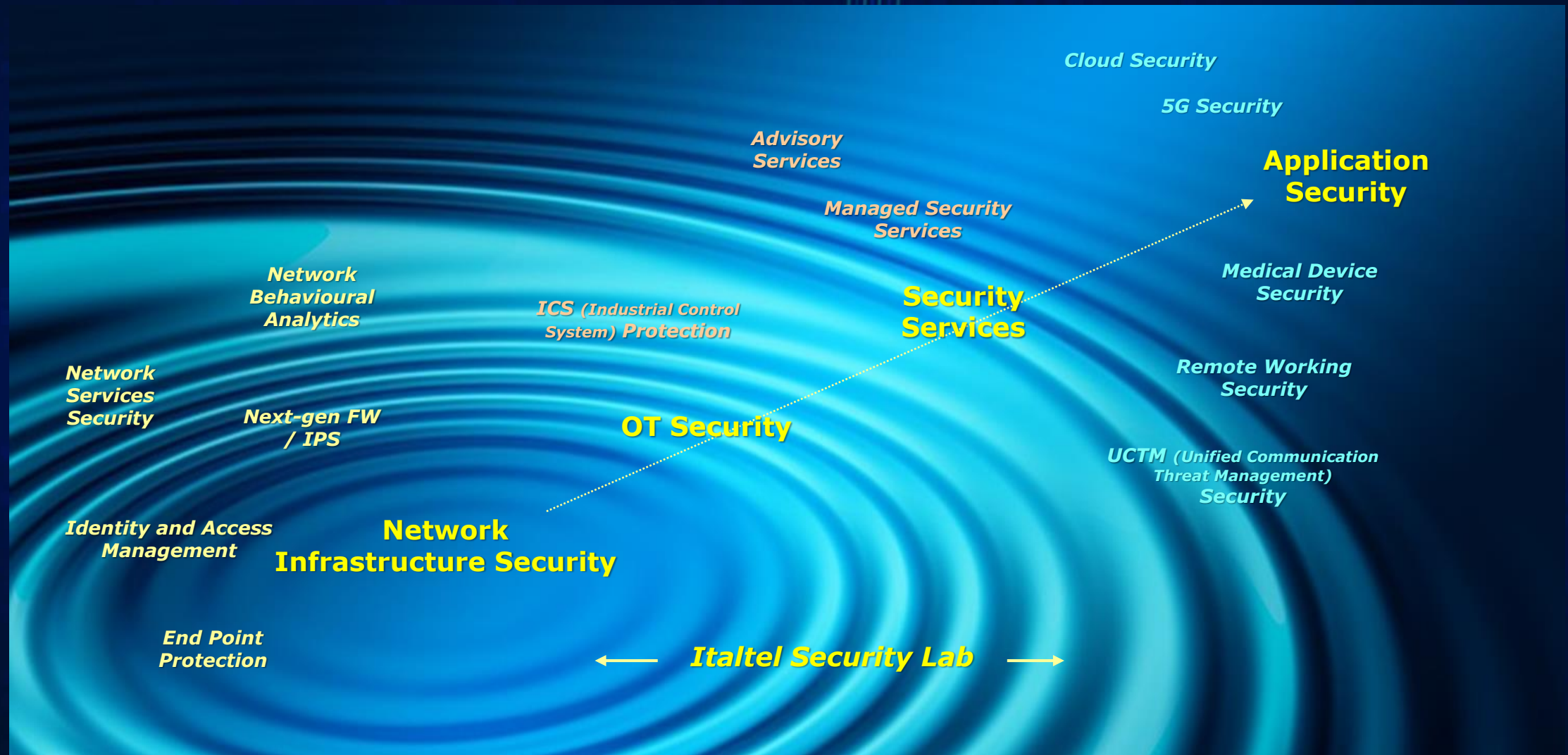
ITALTEL

Italtel

Few industrial sectors have undergone such a radical transformation over the past 100 years as telecommunications. Italtel, born in July 1921, has crossed the last century with the gaze of those who know how to anticipate this transformation and guide it to create solutions that improve our lives.

Italtel has always followed the beacon of **innovation**: pioneer of electronic switching in the 1980s, of Voice over IP in the 2000s, today it continues to innovate with solutions based on **5G, Hybrid Cloud, Cybersecurity, IoT for Industry 4.0 and for Smart Cities**.
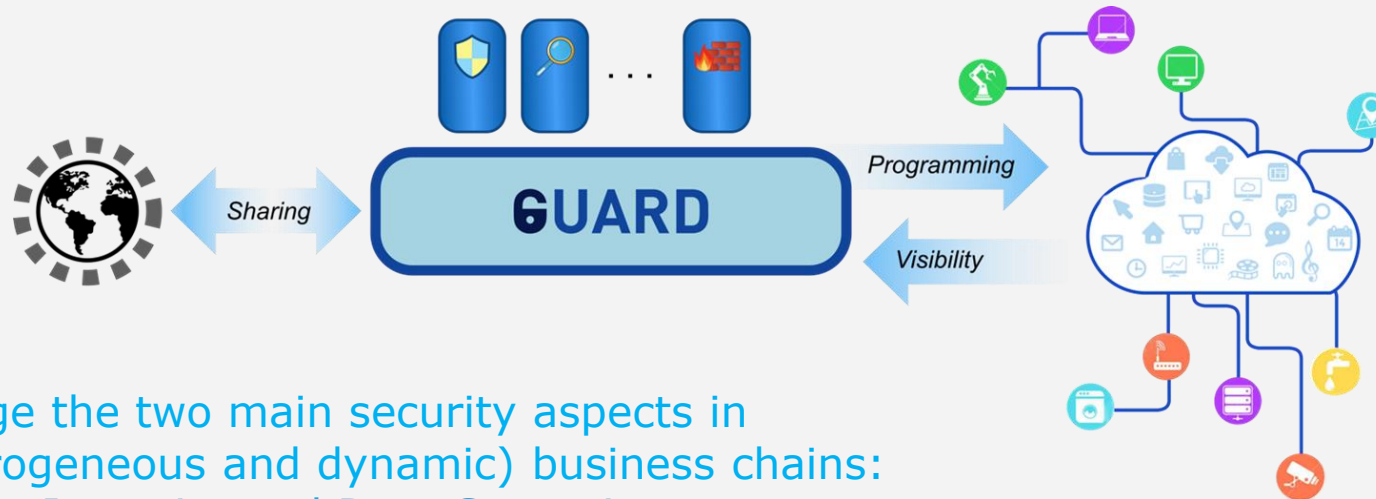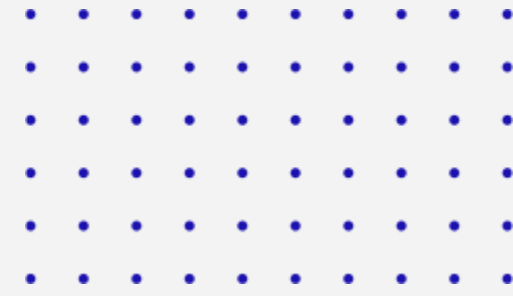
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Italtel Approach

Cloud Security

5G Security

Advisory Services

Application Security

Managed Security Services

Medical Device Security

Network Behavioural Analytics

ICS (Industrial Control System) Protection

Security Services

Network Services Security

Next-gen FW / IPS

OT Security

Remote Working Security

UCTM (Unified Communication Threat Management) Security

Identity and Access Management

Network Infrastructure Security

End Point Protection

← *Italtel Security Lab* →

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GUARD Value

A platform that mediates between detection and inspection

Manage the two main security aspects in (heterogeneous and dynamic) business chains: Service Integrity and Data Sovereignty
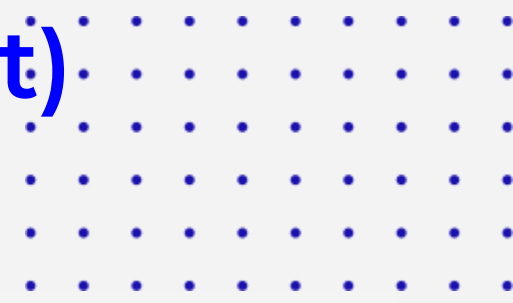
Expose "security capabilities" in digital services and Manage multi-tenancy

Make the system programmable and Leverage novel techniques for detection of anomalies and attacks

Design a holistic framework for advanced end-to-end assurance and protection of business service chains

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Why GUARD for propositions in (almost) any market

- ➢ **ICT-enabled** market evolution
  - ✓ Cost reduction, agility, collaboration, optimization, …
  - ✓ increasingly **service-centric**
- ➢ **Business chains** are increasingly complex
  - ✓ and **actors** are increasingly diversified
  - ✓ with important role of **external Resource and Service Providers**
    - ✓ e.g., see role of cloud / edge resources
- ➢ **Value** of **processes** … and related **criticity**
  - ✓ to be promptly monitored and protected
- ➢ **Value** of **data** … and related **sensitivity**
  - ✓ increasing in volume and velocity
  - ✓ to be **shared** among multiple stakeholders, according to specific purposes, often **AI-driven**

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ICT-Enabled Markets – Smart Energy
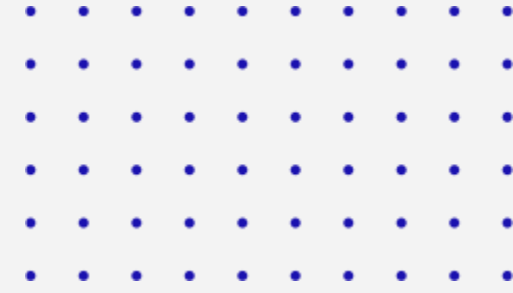
- ✓ **ICT-enabled multi-stakeholder** context
- ✓ **Smart Grid paradigm brings new actors, new business models, increased efficiency, more flexibility ...**
- ✓ **a very critical infrastructure: needed protection from threats**
- ✓ **needed privacy of large sensitive datasets**

*A concrete use case* ...

=

A project involving a major Energy Distribution System Operator

⌄

Define new algorithms for the "intelligent" management of the network, in terms of remote control and automation, visibility of producers and consumers, full use of open meters

⌄

Monitoring and control of medium/low voltage networks; Use of advanced telecomm. techs; Edge computing-based processing of sensitive data; Predisposition for services to end users (e.g., Prosumers)

FIWARE CYBERSECURITY DAY

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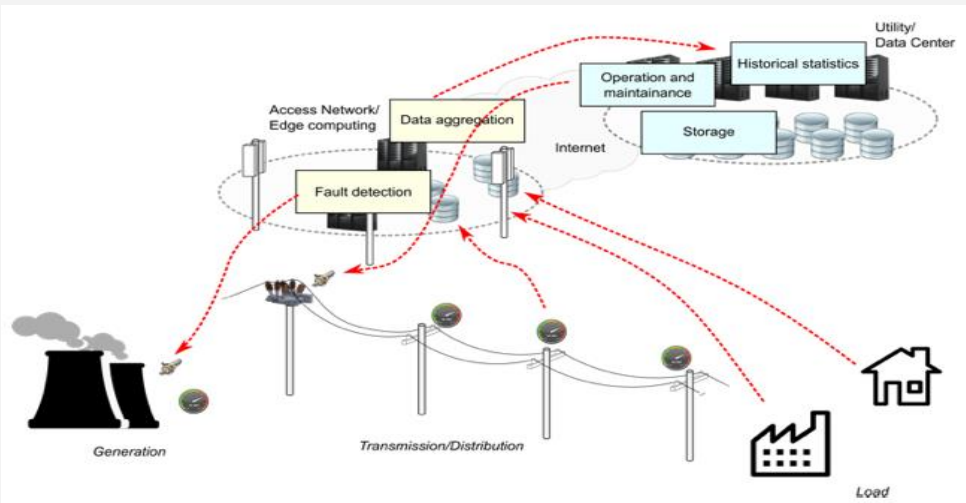
ICT-Enabled Markets – Smart Manufacturing

- ✓ **digitalization as cornerstone of any I4.0 implementation**
- ✓ **multiple actors, models and tech's:** from diversified shop floor to complex supply chains, to external resource providers
- ✓ new scenarios: **human-centric factory, personalized production, ...**
- ✓ **critical processes:** protection from threats
- ✓ needed privacy of **valuable production data**

A concrete use case ...

Company operating in the creation of automated logistics solutions

Protection of automated guided carts from external threats – and Secure connection to the systems used by maintenance personnel

Complete visibility of IT and OT traffic, Access control, Asset inventory profiling, Maintenance systems malware protection, ...

Source: Industrie 4.0 presentation

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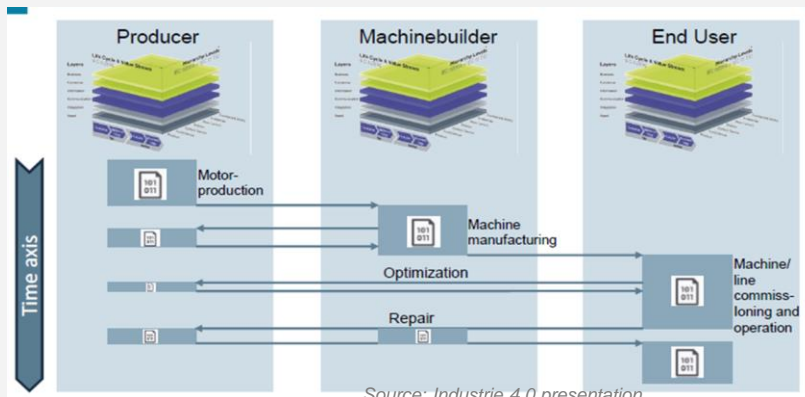
ICT-Enabled Markets – Smart Government / Smart City

- ✓ **Public Administration digitalization –** e.g. in a Metropolitan City(°) **context**
- ✓ **multiple actors,** from decentralized agencies to citizens
- ✓ **usability and confidence** in services from public administration
- ✓ needed privacy of **sensible data** and protection from **improper service use**


A concrete use case …

=

One of the largest Italian Metropolitan Cities

Wide collection and management of data regarding the real-time status and health of infrastructures; Mix with diversified info: traffic, meteo, …

Overall proposition: Innovative monitoring methods; Protection of very sensible data; Possible, governed use of specific data subsets by different entities

(°) i.e., administrative extension of large cities
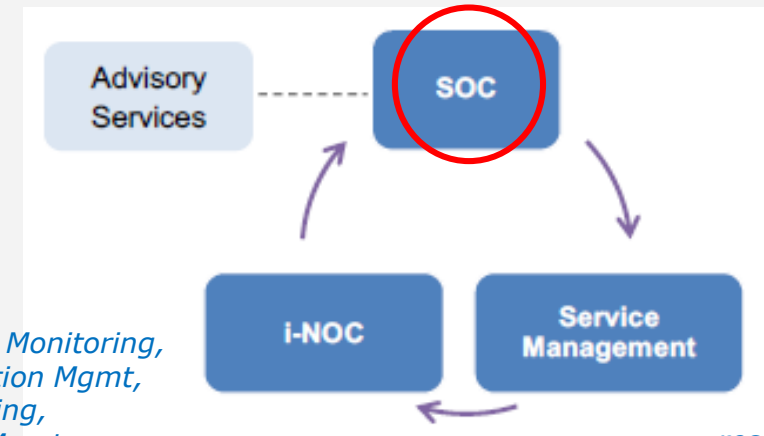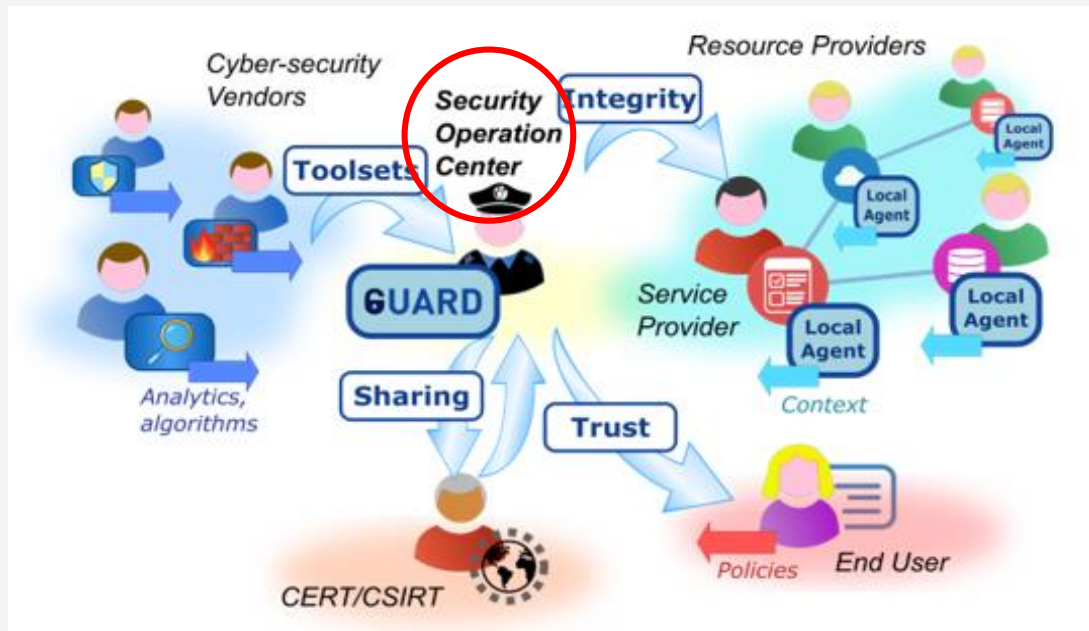
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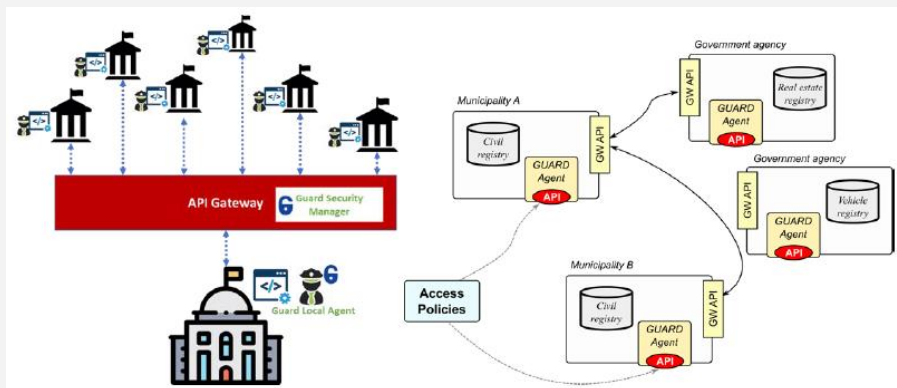
ICT Markets – SOC

A suitable platform to implement (and improve) SOC operations up to a SOCaaS concept

more flexibility and programmability, more automation in detection, more use of AI for needed analysis

An example of current SOC …

- ✓ *SPOC*
- ✓ Security Event Correlation Mgmt
- ✓ escalation to further Analysis levels
- ✓ Event Reporting
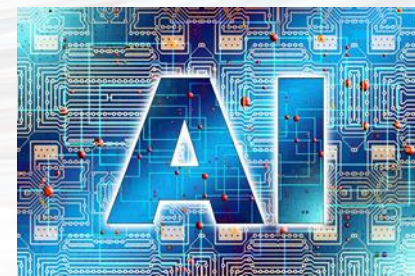- ✓ first-level Remediation

Proactive Monitoring, IT Operation Mgmt, Provisioning, Change Mgmt, Capacity Planning, …

responsible for contracted SLAs

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Evolving Integrations of a GUARD-based Proposition

THANK YOU FOR LISTENING!

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