Is 5G are we there ?

– 5G momentum is now very high

❑Many announcements…

– Asia

– US

– EU

– Discussions occurring: is that really 5G ?

– Full 5G mandatory conditions

❑Spectrum !!

❑support of verticals or it's not 5G

❑Plus others !: manage complexity, standards available,…

PSCE Conference, May 2018

5G PPP

The European path towards global next generation communication network

Work in progress

- White papers on
  - 5G and Factories of the Future (5G-PPP White Paper on Factories-of-the-Future Vertical Sector)
  - 5G and Healthcare (5G-PPP White Paper on eHealth Vertical Sector)
  - 5G and Energy (5G-PPP White Paper on Energy Vertical Sector)
  - 5G and Media (5G-PPP White Paper on Media & Entertainment Vertical Sector)
  - 5G and Automotive (5G-PPP White Paper on Automotive Vertical Sector)

- Identification of
  - main use cases
  - requirements and
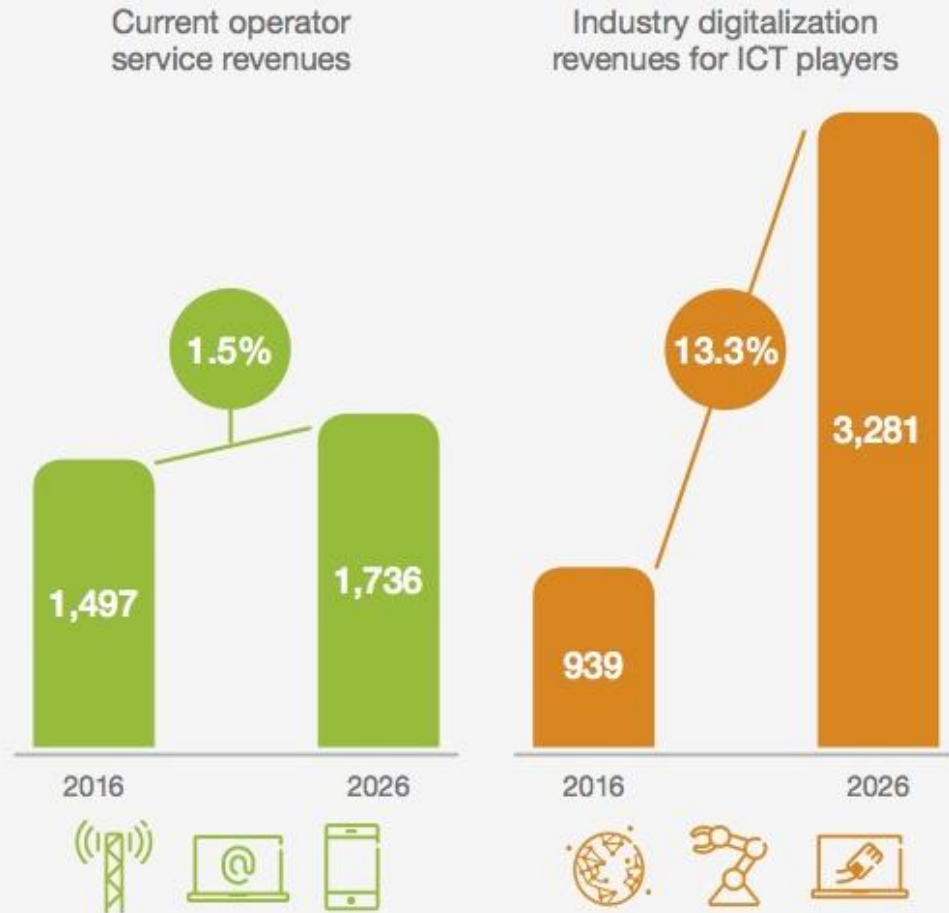 - areas for research and innovation

Strong rationals !

Figure 1: Revenue forecast (CAGR 2016–2026, USD billion)

5G PPP

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5G scope may be wider than you think !
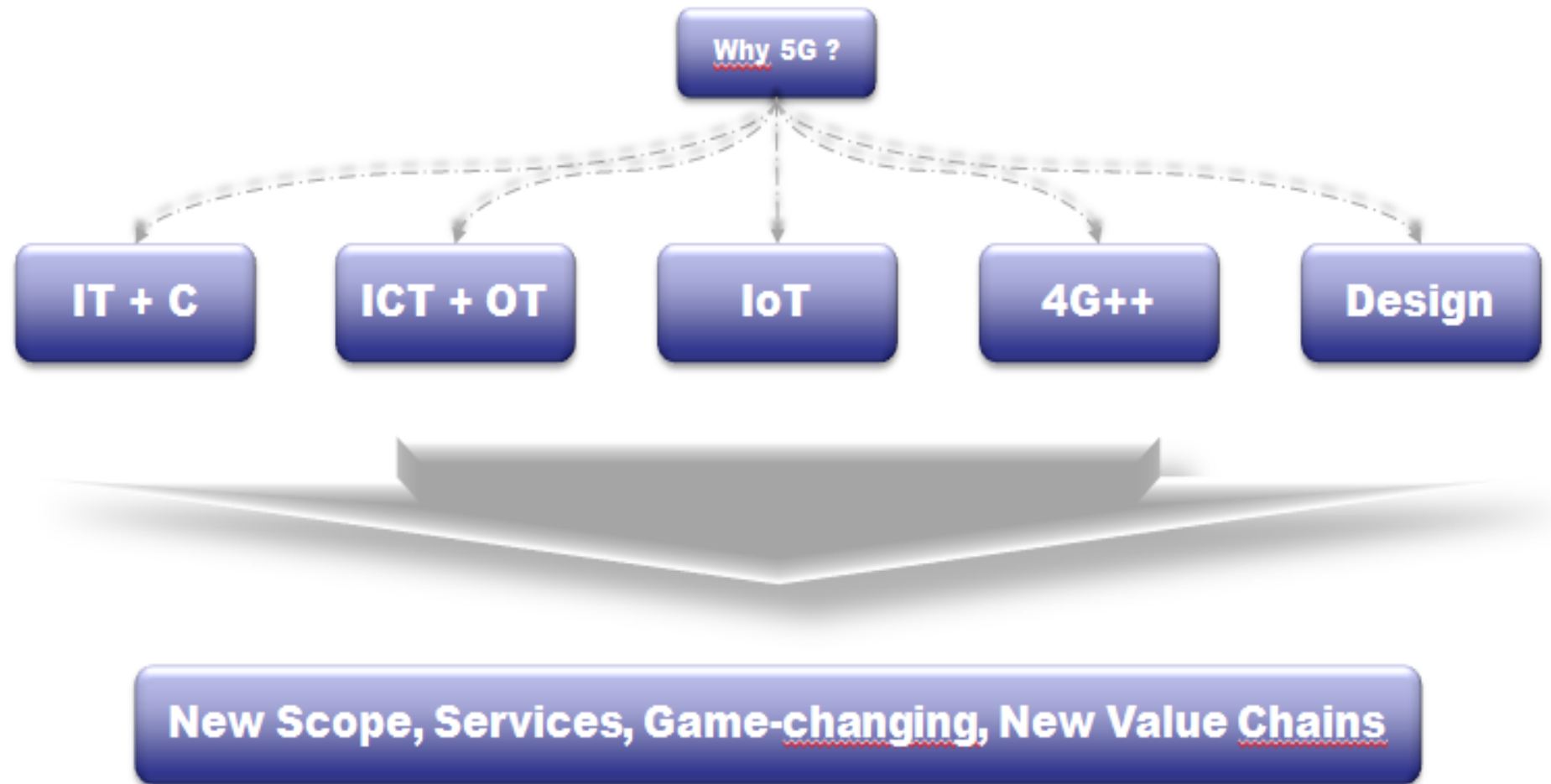
Tenant or Trusted Virtual Operator/broker

End-to-End (Secured and Resilient) Slices per Tenants/verticals
=> Overlay onto diverse providers of physical infrastructures

(Security, other) Service Providers

5G Radio tech.
mmWave, multi-access

SDN/NFV
=> Security & Resilience with smart orchestration

MEC Service Providers   Network Service Providers   Cloud Service Providers

Interesting focus…

Enhanced Mobile Broadband | Capacity Enhancement

- Gigabytes in a second
- 3D Video – 4K screens
- Work & play in the cloud
- Augmented reality

Smart city cameras

Voice

Sensor NW

- Industrial & vehicular automation
- Mission critical broadband
- Self Driving Car

Mission Critical Area

Massive IoT | Massive Connectivity

Low Latency | Ultra-high reliability & Low Latency
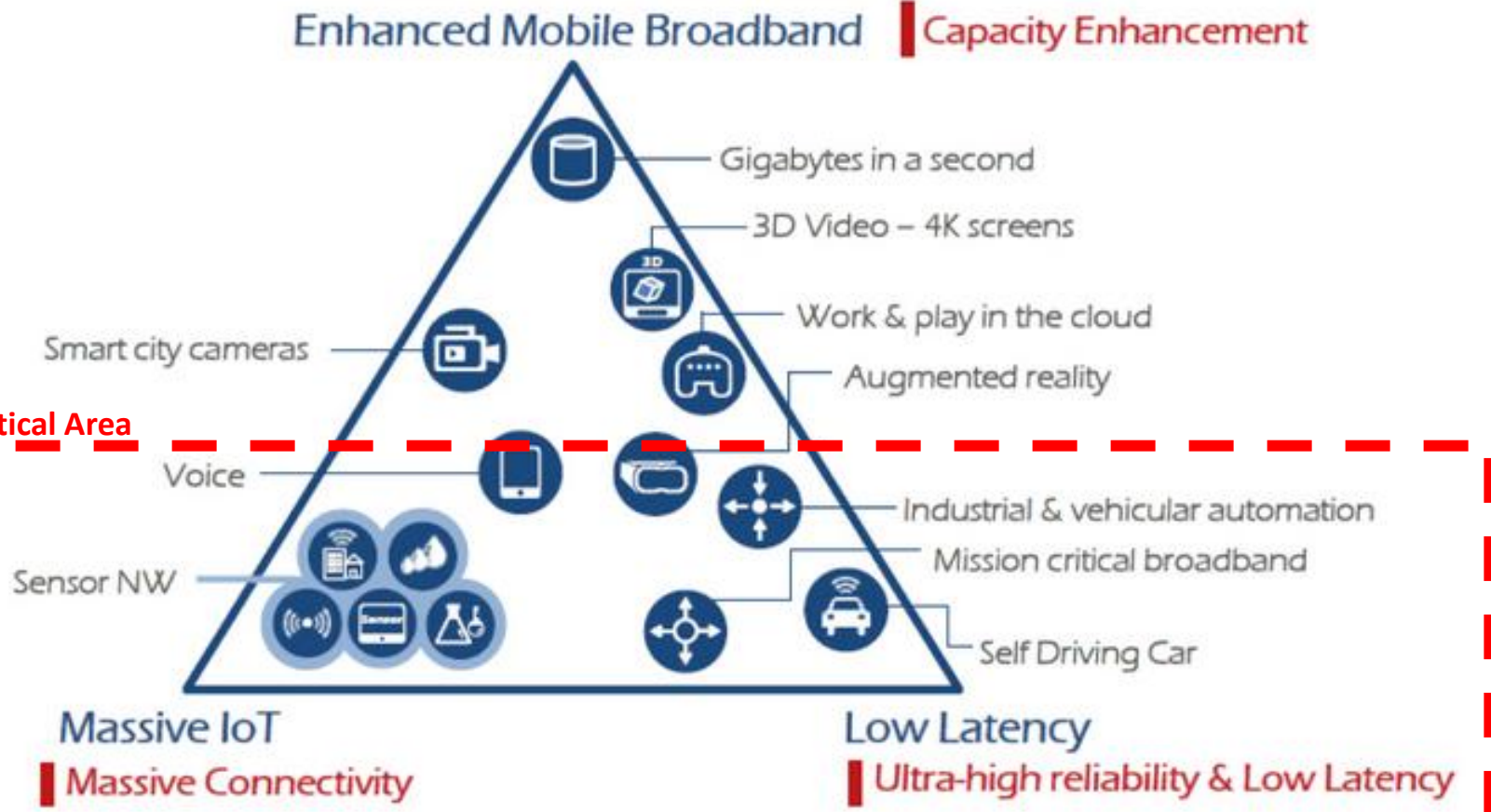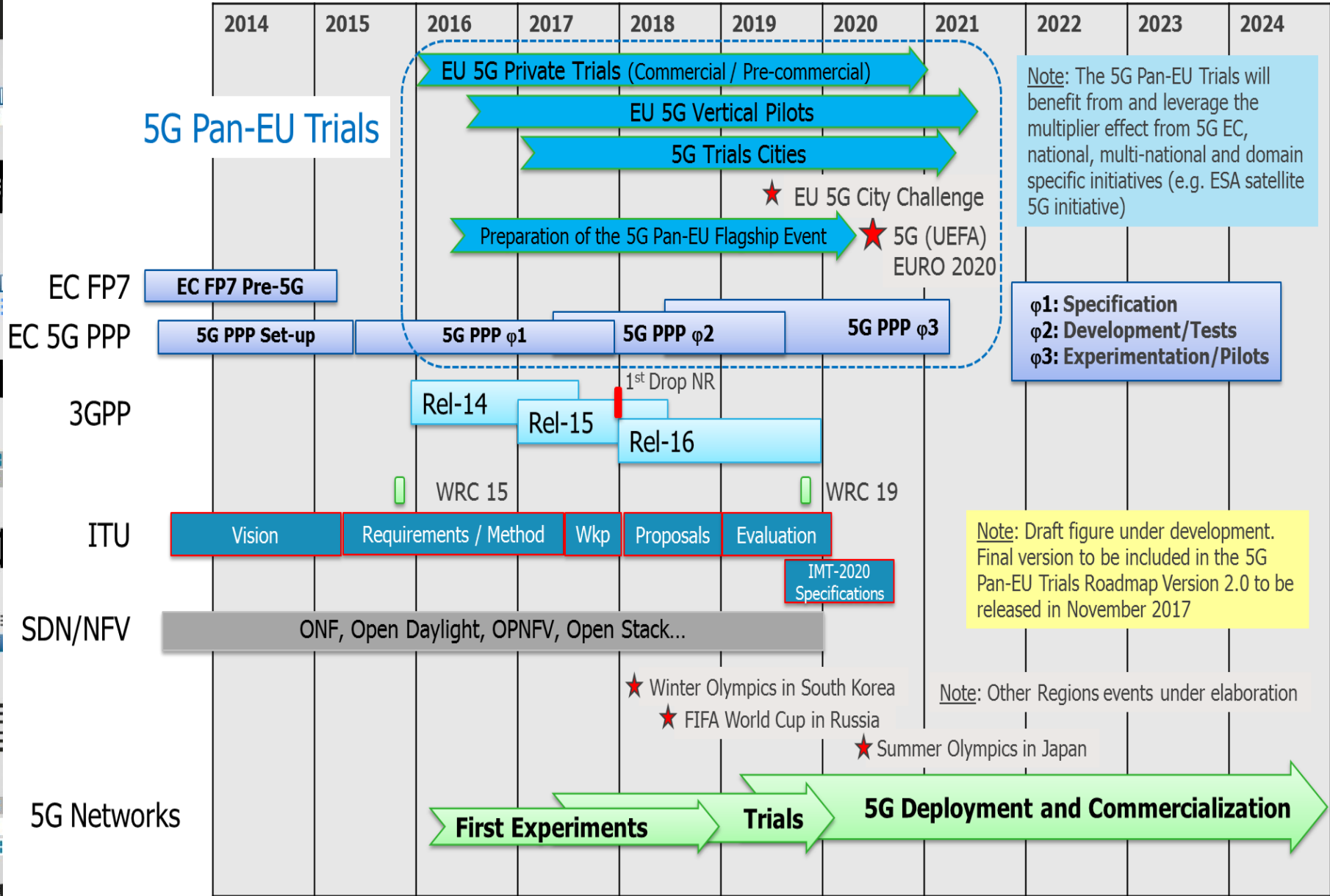
No Full 5G without Security (and resilience)

- Scope: 5G usage and applications <u>up to Mission Critical</u>

- Obvioulsly beyond best effort

- Capturing the Verticals needs:

  - Projects, Events, Trials, MoU, LoI,...

    5GAA, NEM, ESA, EFRA, PlaformI4.0, 5Gslicing, PSCE, ECSO, etc...
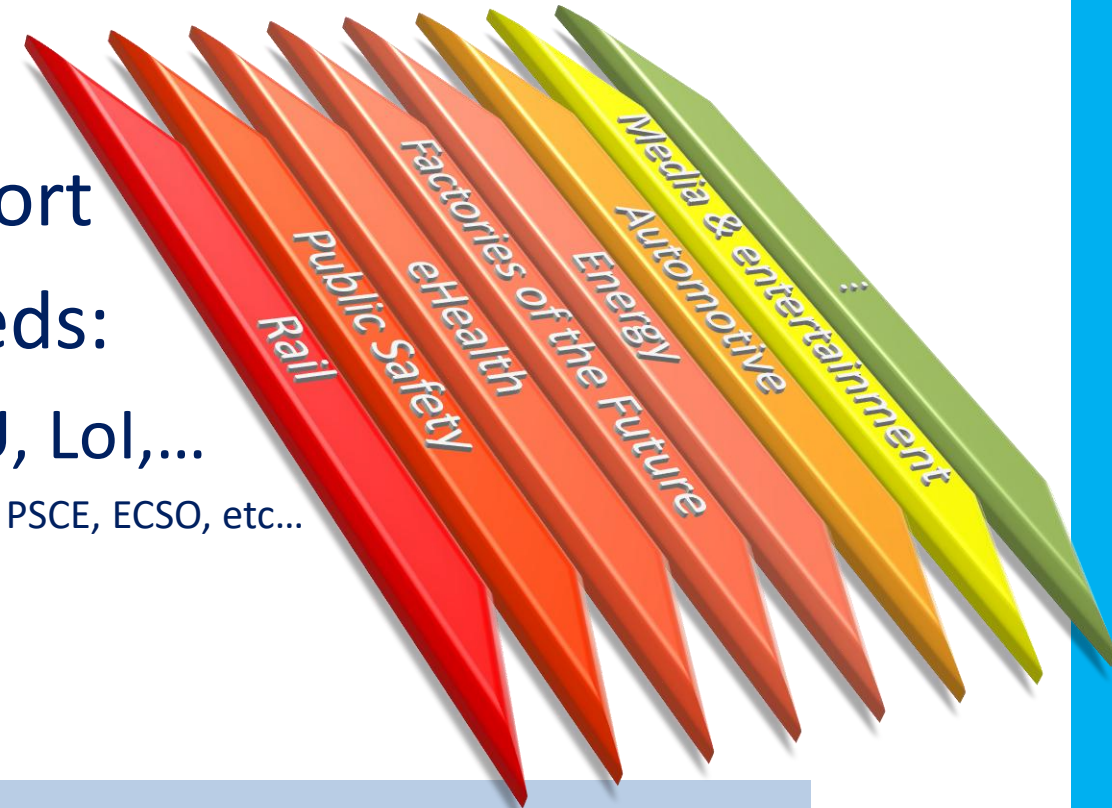
No Mission Critical support in 5G wo/ Security

Security Transformation for the 5G and by the 5G

- Considering the whole 5G evolution;
  - Technologies:
    - ❑ HW (generic ?), virtualization, softwarization, cloud/IT convergence, ICT/OT convergence, SON,...
  - System & Services architecture:
    - ❑ slices, MEC, IoT
  - Business Models:
    - ❑ Security as a Service from Pure Players (MSSPs, IAM,...)
    - ❑ Brokering, Virtual Operators,...

New attack surface, new Security delivery

5th Global 5G Event
5G New Horizons Wireless Symposium

Full 5G Techno-enabled innovative Strategies

Deception, by design…by orchestration,…AI, distributed ledgers, trusted Elements, trusted third parties,…..

e.g Source Code morphology

PROTECT

DETECT

SDsec
The 5G companion

REMEDIATE

e.g pattern matching, Anomaly detection

THREAT INTELLIGENCE

e.g distributed autonomic response

e.g OSINT
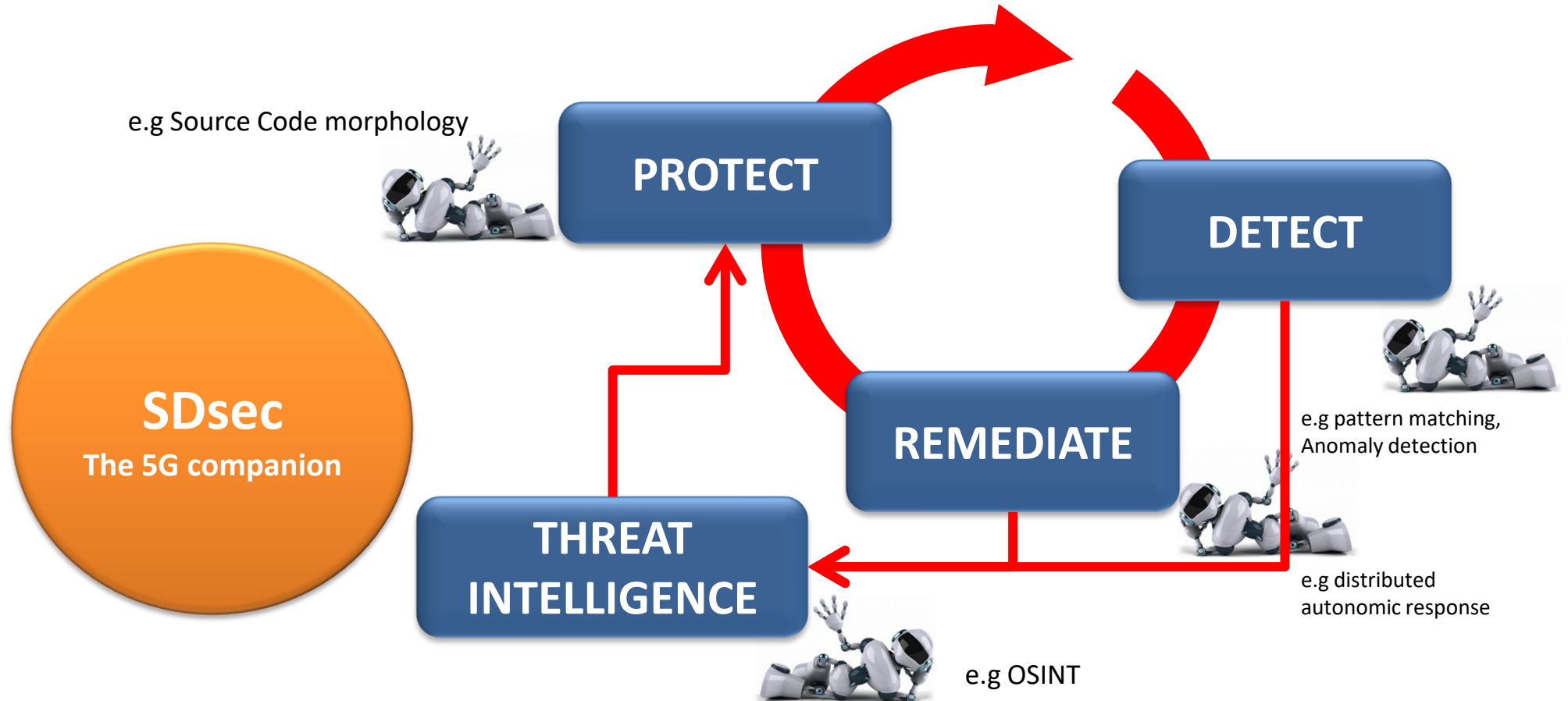
Make it Smart !

Large and diverse transformations

- Renewal of (security) product and services

- Innovation enabled (even by SMEs into the big picture)

- From system integration towards Service aggregation

CHALLENGES !!: openness, standards & regulation

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Still some gaps...
...what's missing for Public Safety ?

- Full 5G promises mandates ?
  - ❑ open APIs and interfaces to combine E2E service components
  - ❑ HW/SW components, sub-systems, services, third-parties @relevant security-grade...with some sort of evaluation...
  - ❑ Security as smart and dynamic as other 5G fields
  - ❑ Liabilities redefined
  - ❑ Actual convergence of verticals regulation and 5G
  - ❑ ...

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A step forward w/ PSCE

- LoI between PSCE and 5G-IA

- Action Plan
  - White paper & dedicated workshops
  - ...
  - Although potential common work with ECSO

5G PPP

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5G IA
INFRASTRUCTURE ASSOCIATION

Boulevard Saint-Michel, 47
B-1040 Brussels
Belgium

PSCEurope
Public Safety Communication Europe

Rue des Deux Eglises, 39
B-1000 Brussels
Belgium

Letter of Intent to cooperate between PSCE and 5G-IA

The parties:

- Public Safety Communications Europe (PSCE)
- 5G Infrastructure Association (5G-IA)

Having noted the interest to establish a closer relationship in order to foster cooperation;

Considering that the aims of each organization are:

- For PSCE, to foster by consensus built
  safety communicati

Either party may te

The principal contacts for the management of
General, Marie-Christine Bonnamour and Jean-Pierre Bienaimé.

Agreed by both parties on 23rd May 2018.

Manfred Blaha
President, PSCE

Colin Willcock
Board Chairman, 5G-IA

http://5g-ppp.eu

Thank you for your attention!