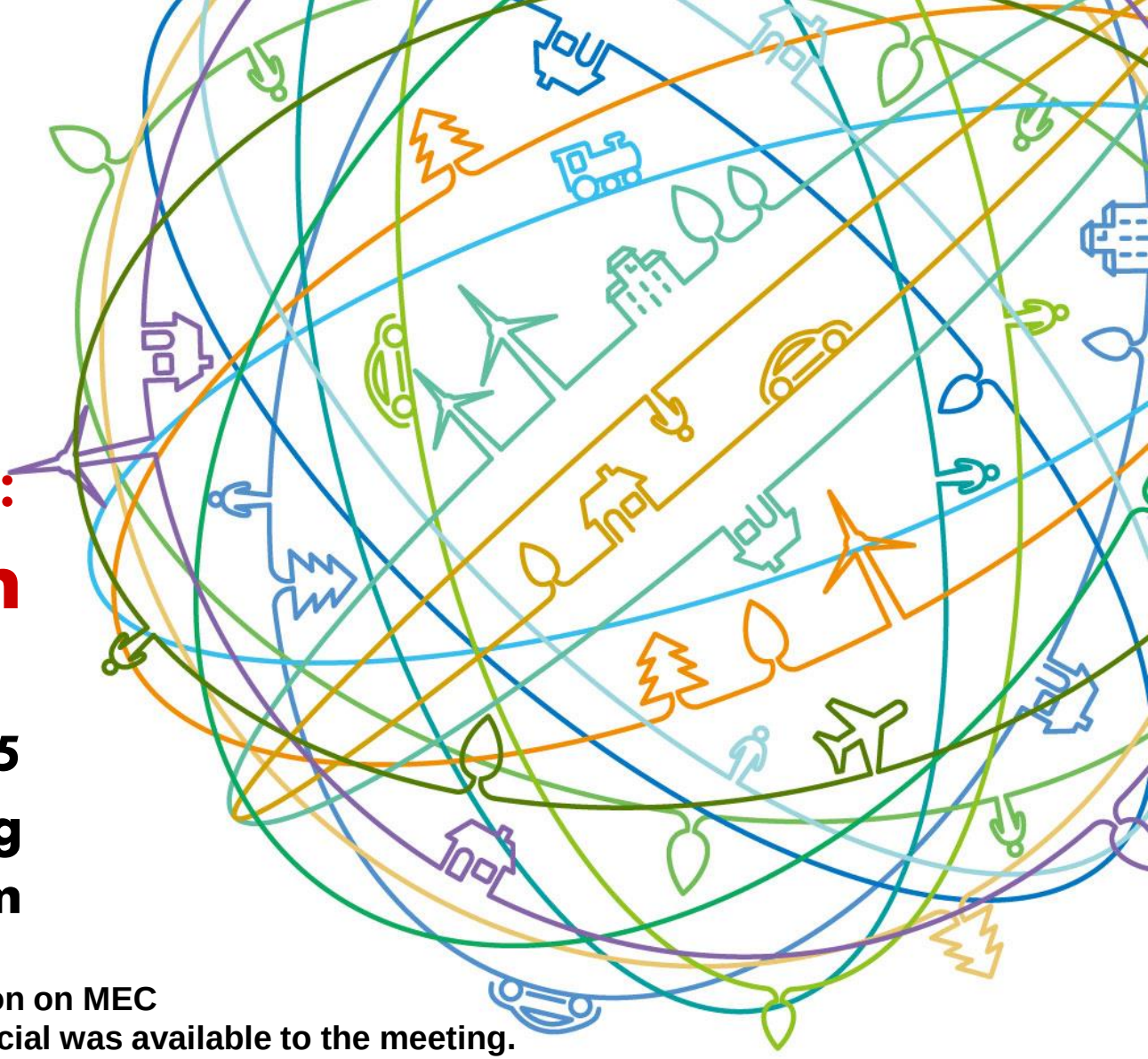
Mobile Edge Computing: Unleashing the value chain



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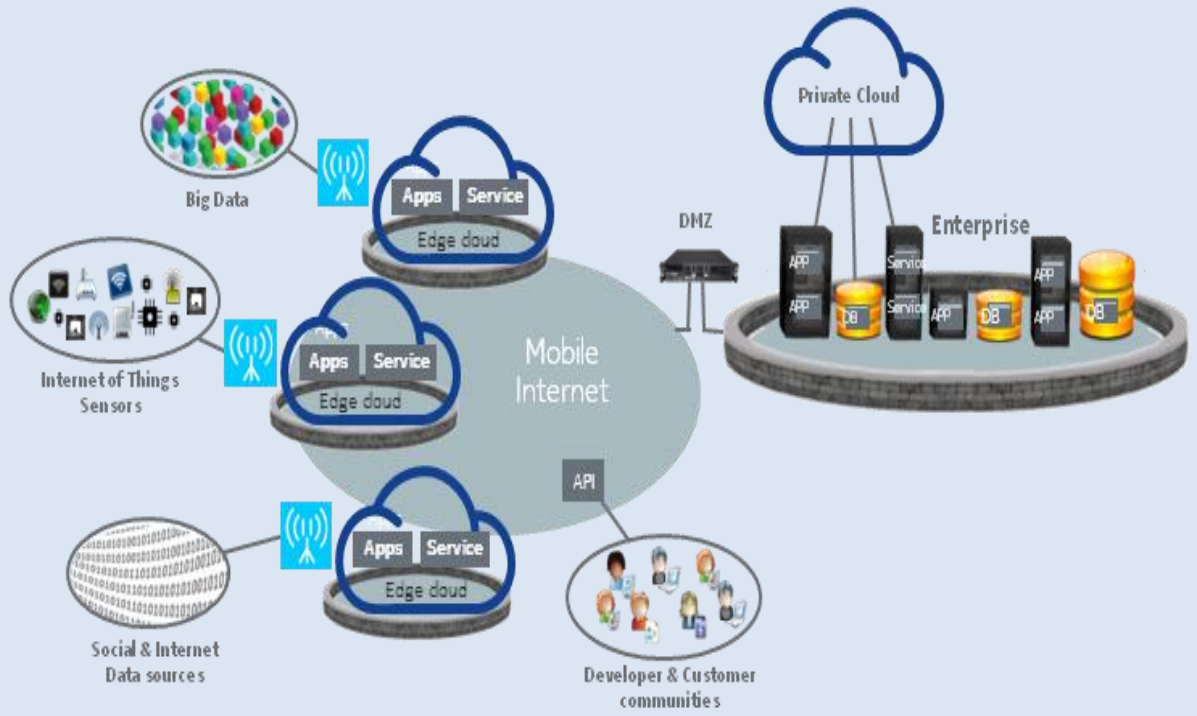
Note :The content has been taken from an official ETSI Presentation on MEC but put in an Huawei template, since no Huawei ETSI ISG MEC official was available to the meeting.

Market Needs

- Unlocked and efficient utilization of the radio and the network resources
- Convergence of compute and connectivity are the pathway to 5G
- Growth in mobile traffic
  - **Consumers** buying innovative personalised services delivering a high level of experience using smart devices and consuming data hungry content
  - **Businesses** need competitive, scalable, secure connectivity that is agile and intelligent
  - **IOT Market** expected to be 28.1 billion ‘things’ by 2020 according to IDC.

Mobile Edge Computing
An environment for Innovation and value creation



- Proximity, Edge cloud, Low latency, Radio Real-time information, Location aware

IT service environment at the edge of the mobile network

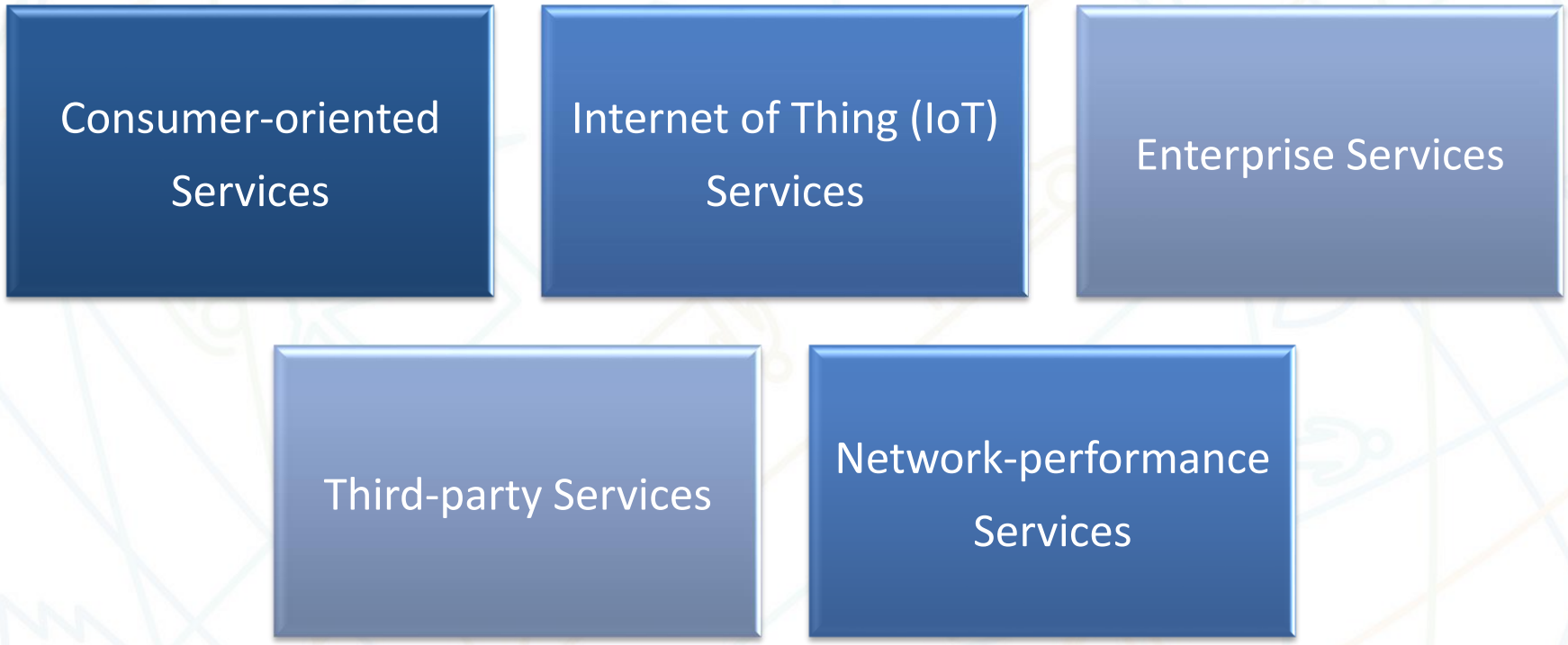
- Innovation
- Revenue Generator

Business Benefits

A new value chain and an energized ecosystem, based on Innovation and business value	Mobile operators, application developers, content providers, OTT players, network equipment vendors, IT and middleware providers can benefit from greater cooperation
Flexibility and agility	Operators can open their Radio Access Network (RAN) edge to authorized third-parties, allowing them to flexibly and rapidly deploy innovative applications and services
New Market Segments	New innovative applications and services towards mobile subscribers, enterprises and vertical segments

Translates local context, agility, rapid response time and speed into value

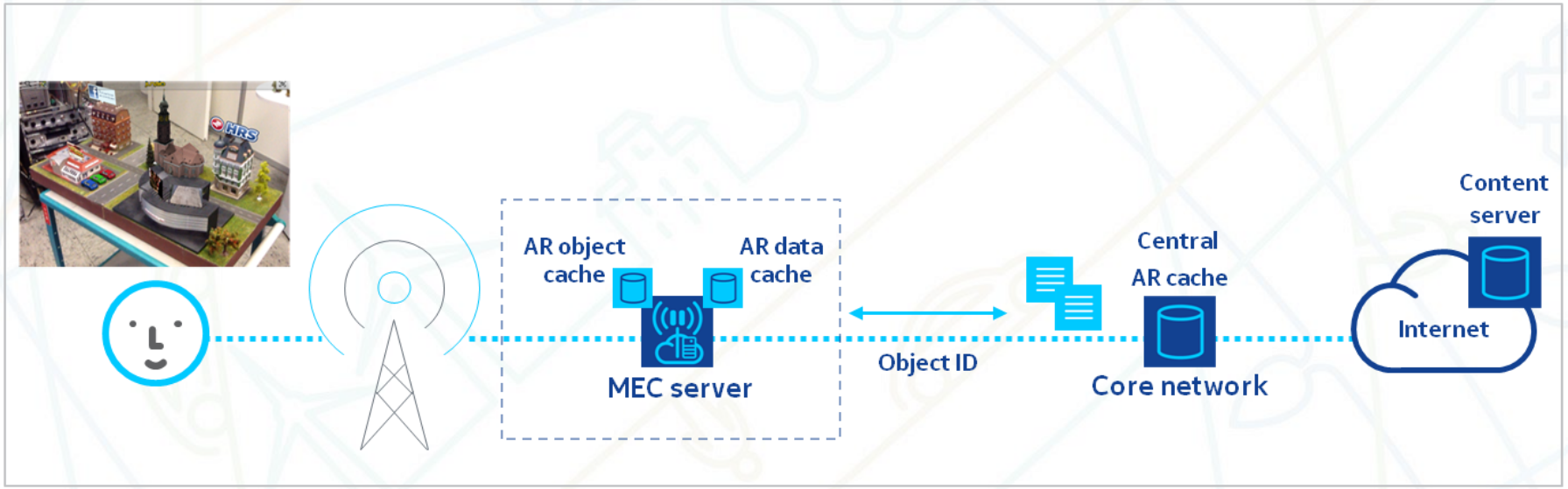
Edge Computing Service Scenario Categories



Consumer-oriented Service Scenarios

Augmented Reality

1

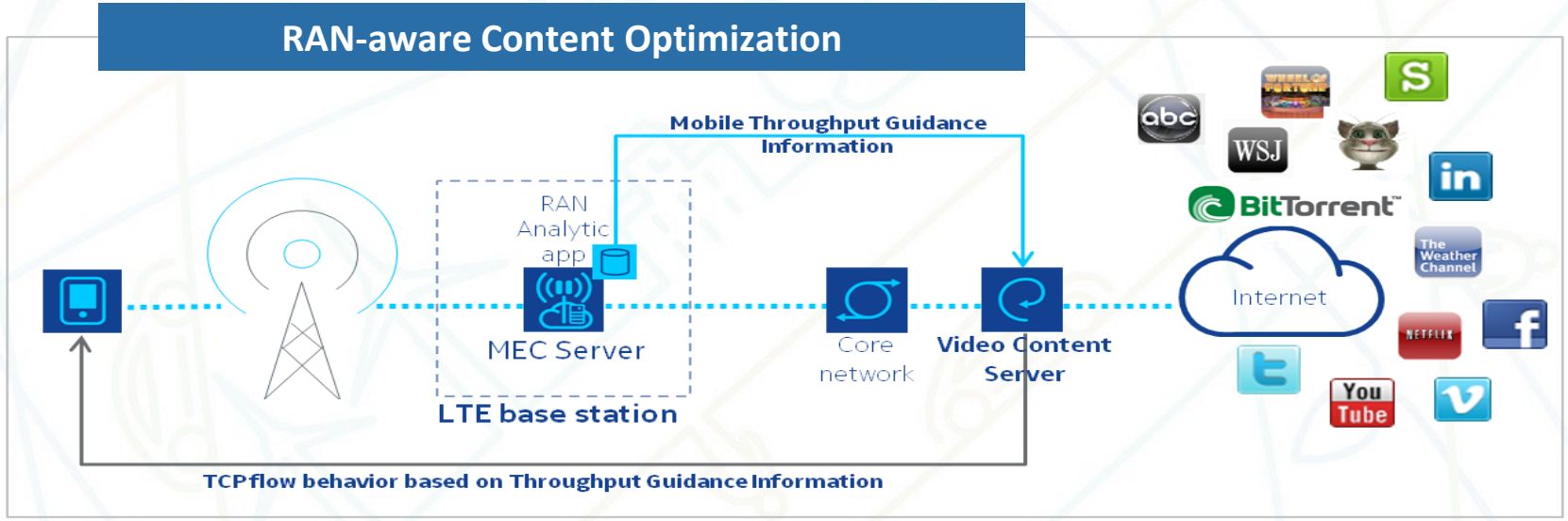


- The MEC application analyses the output from a device's camera and the precise location; objects viewed on the the device camera are overlaid with local augmented reality content.
- Enables personalized experience of a museum or other (indoors or outdoors) points of interest
- Ensures low latency and high rate of data processing

Network-performance Service Scenarios

Intelligent Video Acceleration

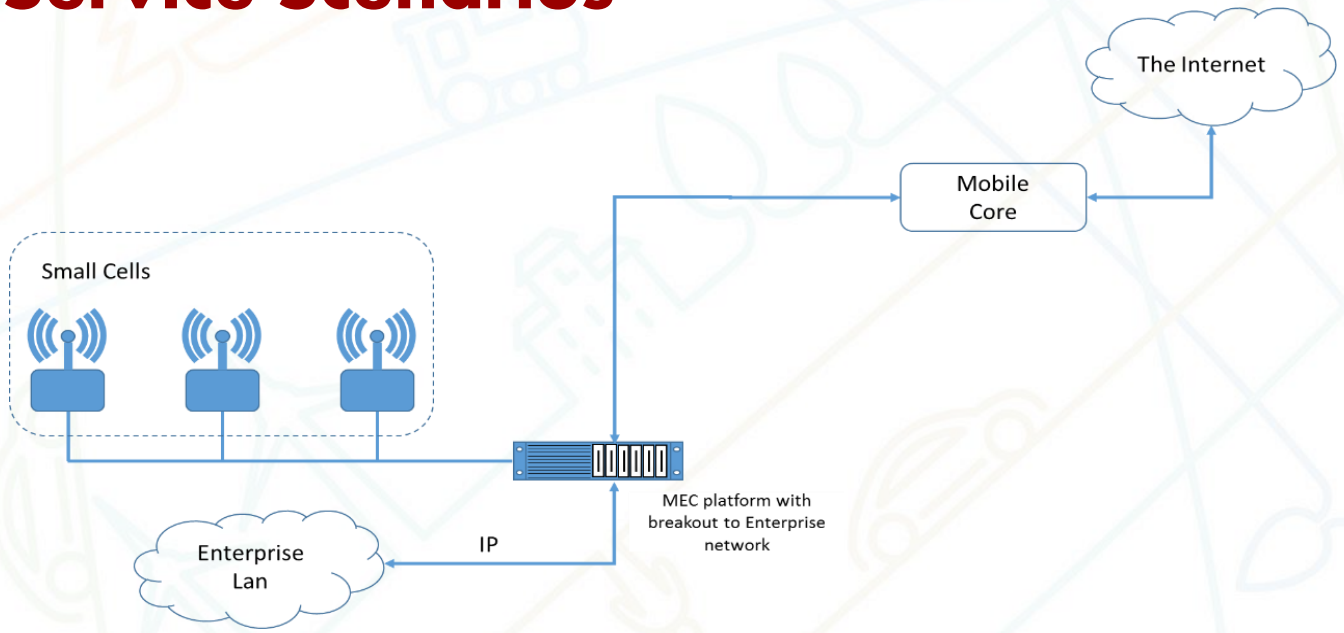
2



- A Radio Analytics application provides the video server with an indication on the throughput estimated to be available at the radio downlink interface
- The information can be used to assist TCP congestion control decisions and also to ensure that the application-level coding matches the estimated capacity at the radio downlink.
- Enables improved video quality and throughput

Enterprise Service Scenarios

3

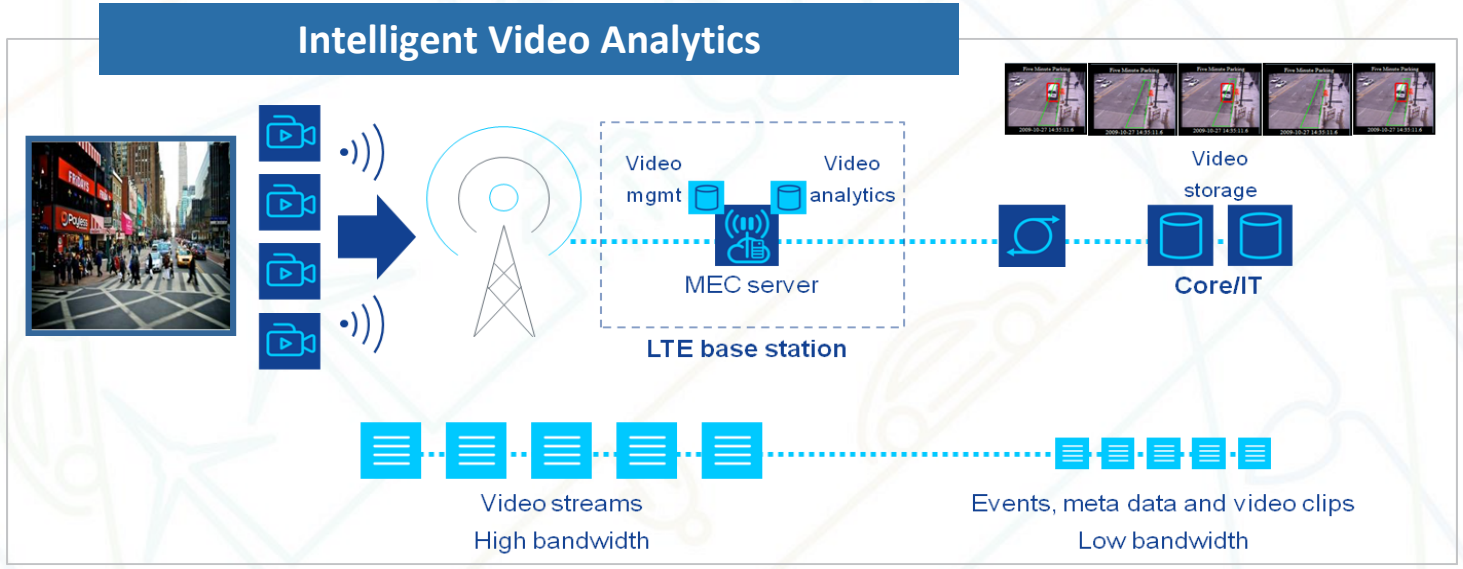


- Enterprise networks are moving towards a true mobile office coupled with cloud based business tools integrated with mobile devices
- MEC facilitates hosting of revenue generating services
- Round trips to the core network are reduced for enterprise data, increasing security and resiliency whilst reducing latency. Classification of data services enables segregation and routing of traffic for different users
- Converging of WiFi and mobile resources at the enterprise – assisting with network selection, controlling which devices are connected via cellular access and which devices are connected over WiFi

IoT Service Scenarios

Video Analytics

4

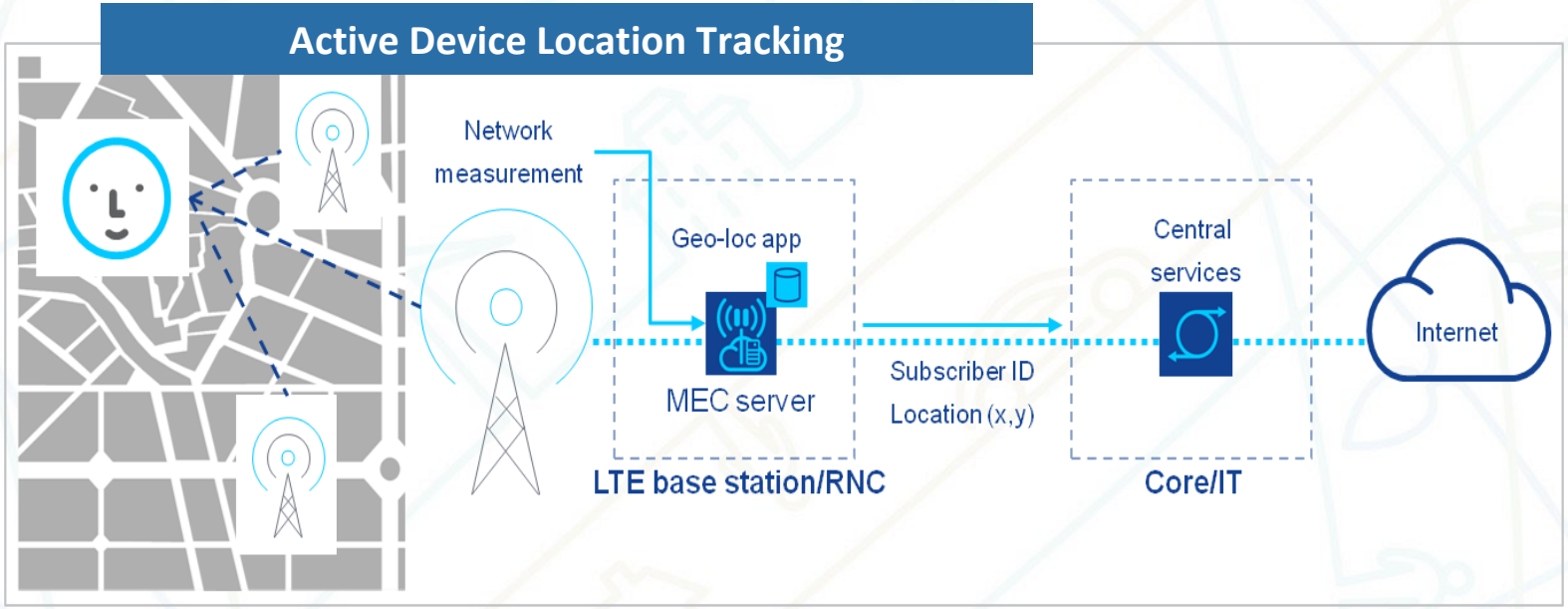


- Live video stream analytics at the mobile edge
- Events are triggered automatically (e.g. movement, missing objects, crowd, etc.); enables fast detection and action triggering
- Optimizes backhaul and transport capacity
- Applicable to public safety, smart cities

Third-party Service Scenarios

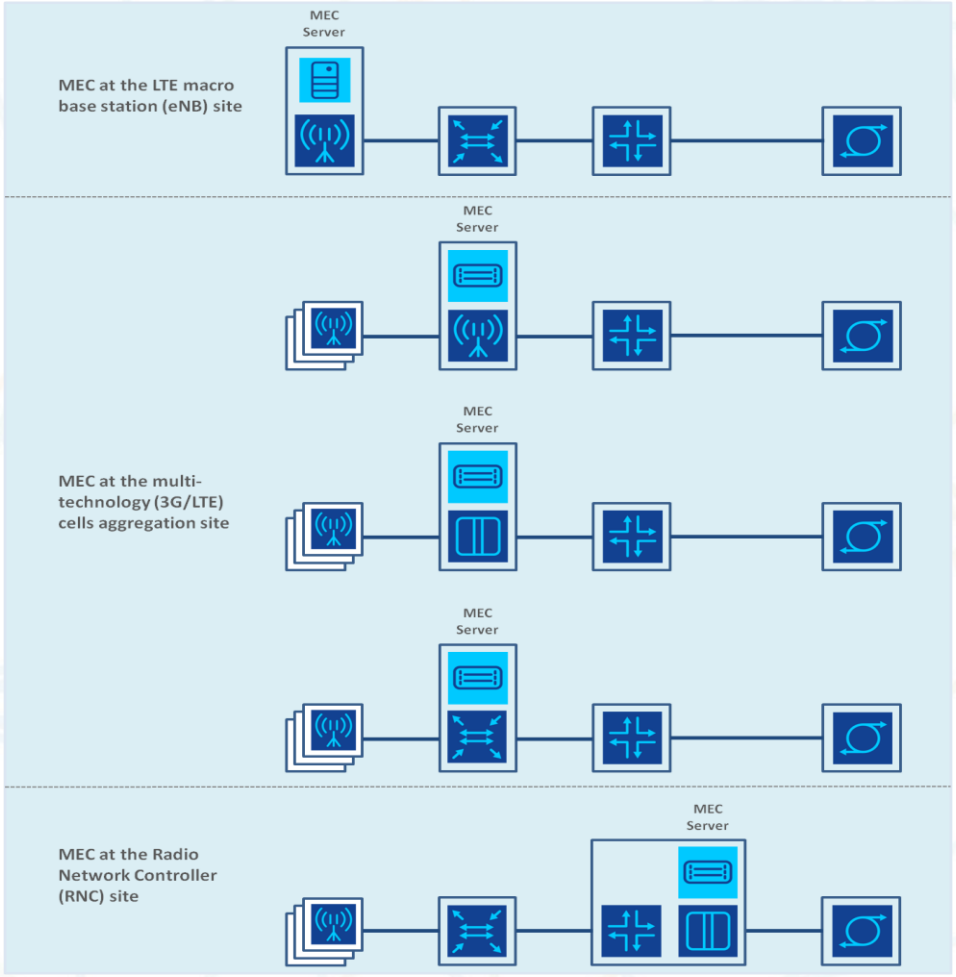
Location Based Services

5



- Active device location is provided and not restricted to GPS availability through a standard MEC API's in real time
- Helps to locate specific users and understand how the crowd is distributed
- Applicable to Smart City, Geo-Fencing, Retail, and advertising

Edge Computing Deployment Examples



The multi-technology cell aggregation site can be located **indoor** or **outdoor**, for example:

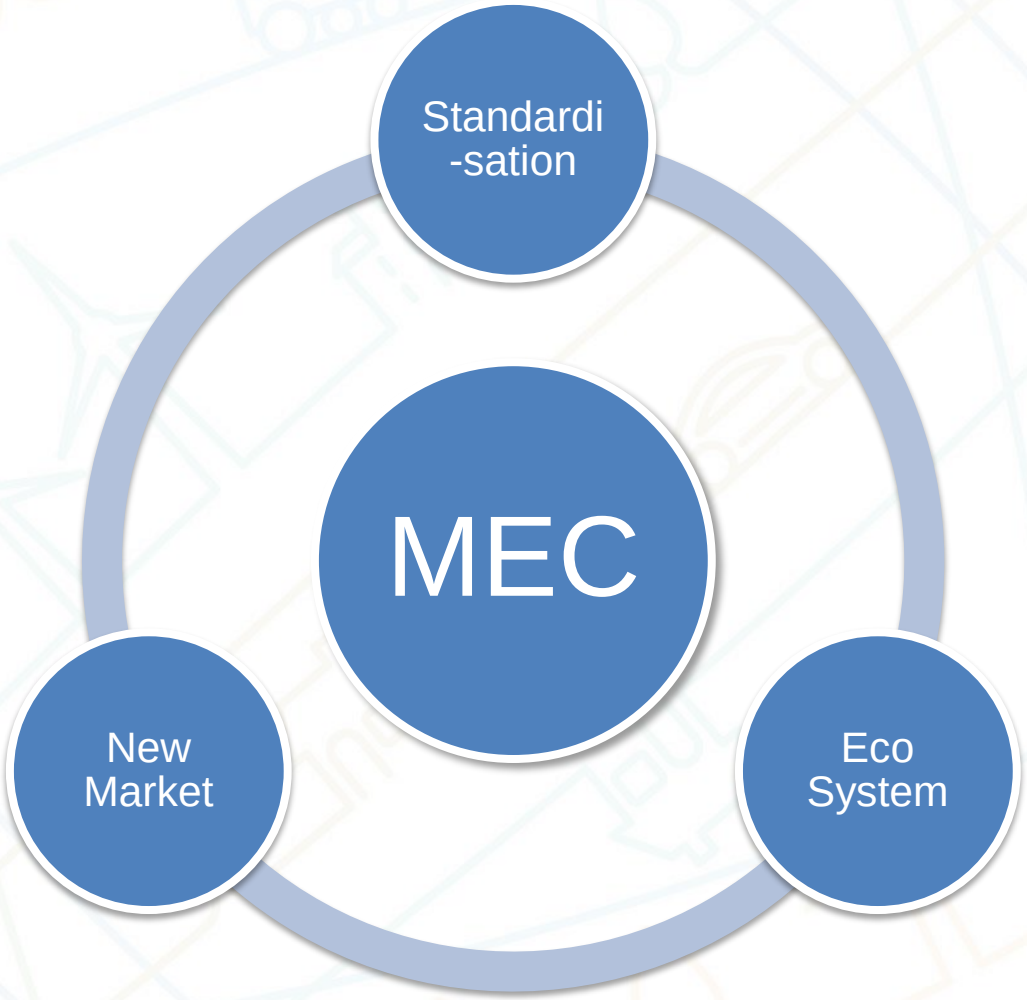
- within an enterprise (e.g. hospital, large corporate HQ);
- for a special public scenario (e.g. stadium, shopping mall) to control a number of local, multi-technology (3G/LTE) access points, providing radio coverage to the premises.

ETSI ISG MEC Members/Participants

A multi-stakeholder industry initiative:

A NEW VALUE CHAIN: MOBILE OPEARTORS *** BASE STATION VENDORS *** TECHNOLOGY PROVIDERS *** APPLICATION AND CONTENT PROVIDERS

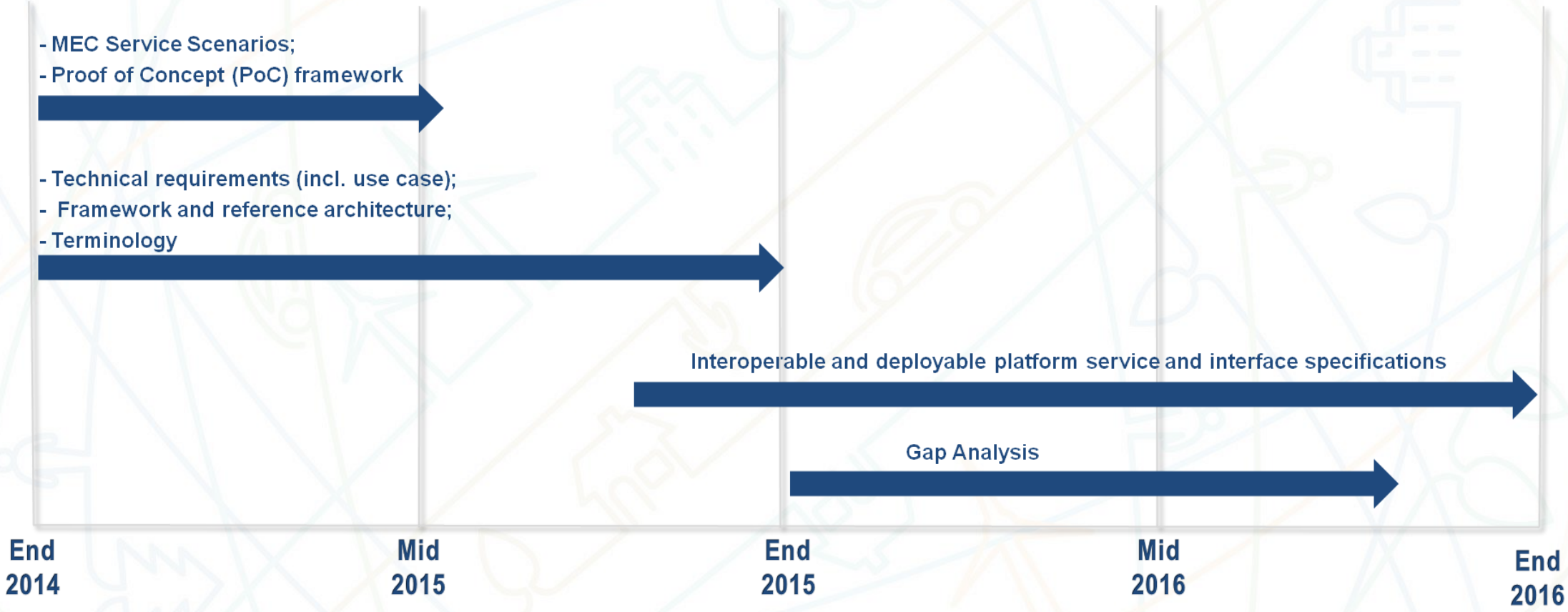
ETSI ISG MEC's Goals



MEC Proofs of Concept (PoC)

- MEC PoCs are multi-party projects to:
  - Build market awareness and confidence
  - Demonstrate scenarios, use cases and technology
  - Feedback from MEC PoCs is provided to the ISG MEC
- ETSI ISG MEC encourages PoCs to illustrate key aspects of the group‘s activities
- For further details please look at http://mecwiki.etsi.org/ and create PoC proposals

ETSI ISG MEC: Expected Deliverables
First phase – lifetime spanning 24 months



Conclusion

- Mobile Edge Computing (MEC) can complement SDN and NFV, advancing the transformation of the mobile-broadband network into a programmable world, ensuring
  1) highly efficient network operation and service delivery,
  2) ultimate personal experience, and
  3) new business opportunities.
- Mobile Edge Computing is available now and is a key enabler for 5G

Thank you

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