

SCOTT Methodology for Building Blocks and Use Cases

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secure connected trustable things



SCOTT has received funding from the Electronic Component Systems for European Leadership Joint Undertaking under grant agreement No 737422. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and Austria, Spain, Finland, Ireland, Sweden, Germany, Poland, Portugal, Netherlands, Belgium, Norway.



SCOTT Achievements

"elevator pitch"

SCOTT will deliver Technology and Use Cases for advancing security, privacy and trustability of IoT connected systems:

- **20+ Use cases will demonstrate the Impact**
 - security, privacy and trustability
 - technology
 - market
- **Building Blocks as technology basis for advanced IoT connectivity**
 - support the use cases
 - create components for future business
- **Fulfil the need of European Industries for trustable IoT systems and communications**

SECURITY



TRUSTABILITY



SAFETY



PRIVACY

USABILITY

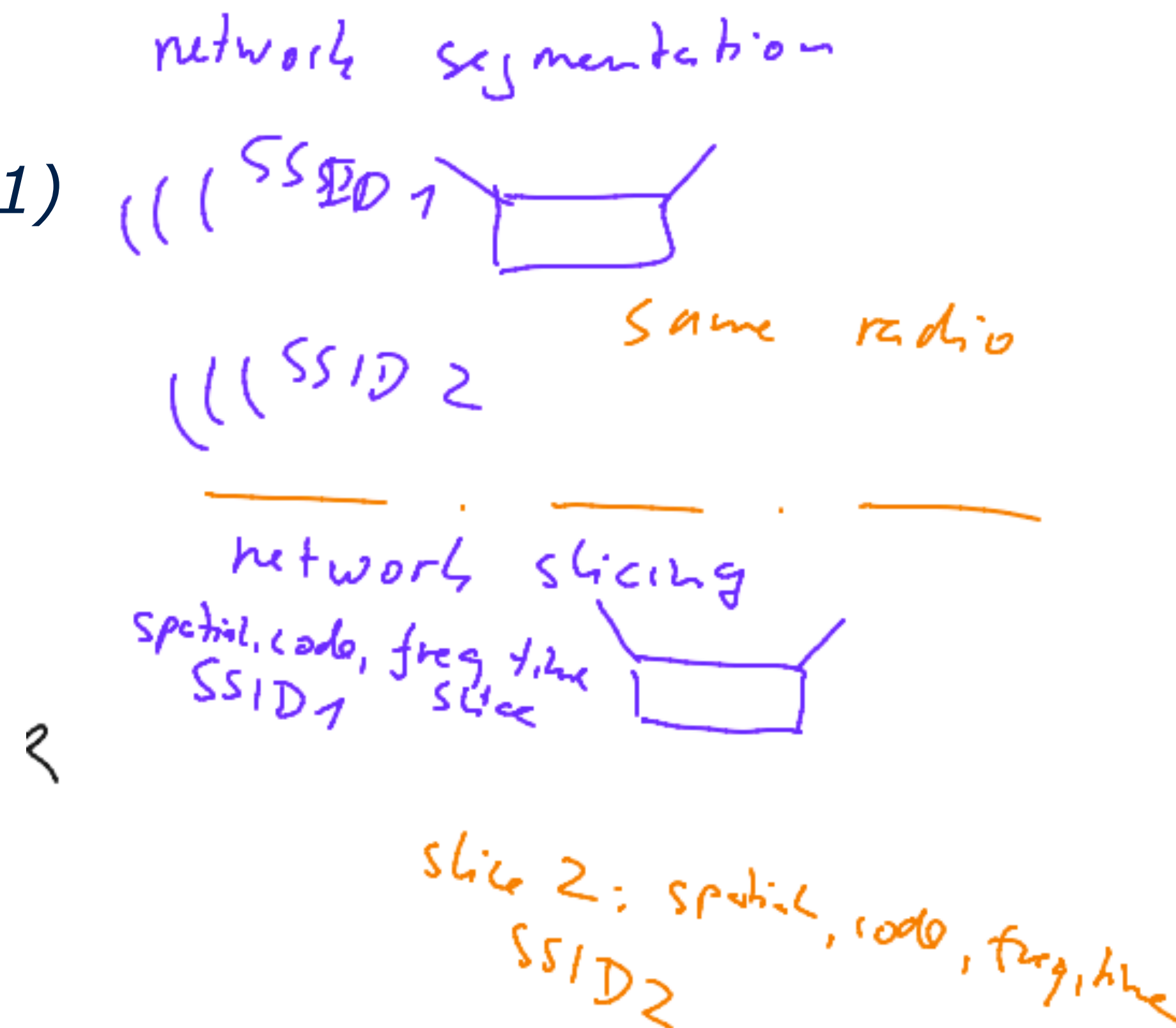


Methodology for use cases applied to WP8 "Managed Wireless"

Steps



- **Core use case: "Managed wireless"**
 - Analysis of protocols for monitoring wireless access (C.1)
 - Provide tools for identification of "bad" wireless (C.2)
 - Manage wireless remotely (C.3)
- **Extended use case: Service differentiator for future services**
 - Routing, e.g. micro-routing (E.1)
 - Network segmentation (E.2) and slicing (E.3)
- **Future services and application areas**
 - TelCo 5G network slicing (F.1)
 - IoT Gateway monitoring (F.2)
 - IoT Management (F.3)
- leading to **Demo and Impact**



Demo and Impact of Use Case applied to WP8 “Managed Wireless”

■ Demonstration

- C.1-C.3 monitoring and management of wireless
- demonstrate Security, Privacy enhancement
- Collaboration with pilot installations elsewhere (applicability)
- extended demonstration: 5G network slice (tbc), IoT gateway (tbc) - depends on technology development

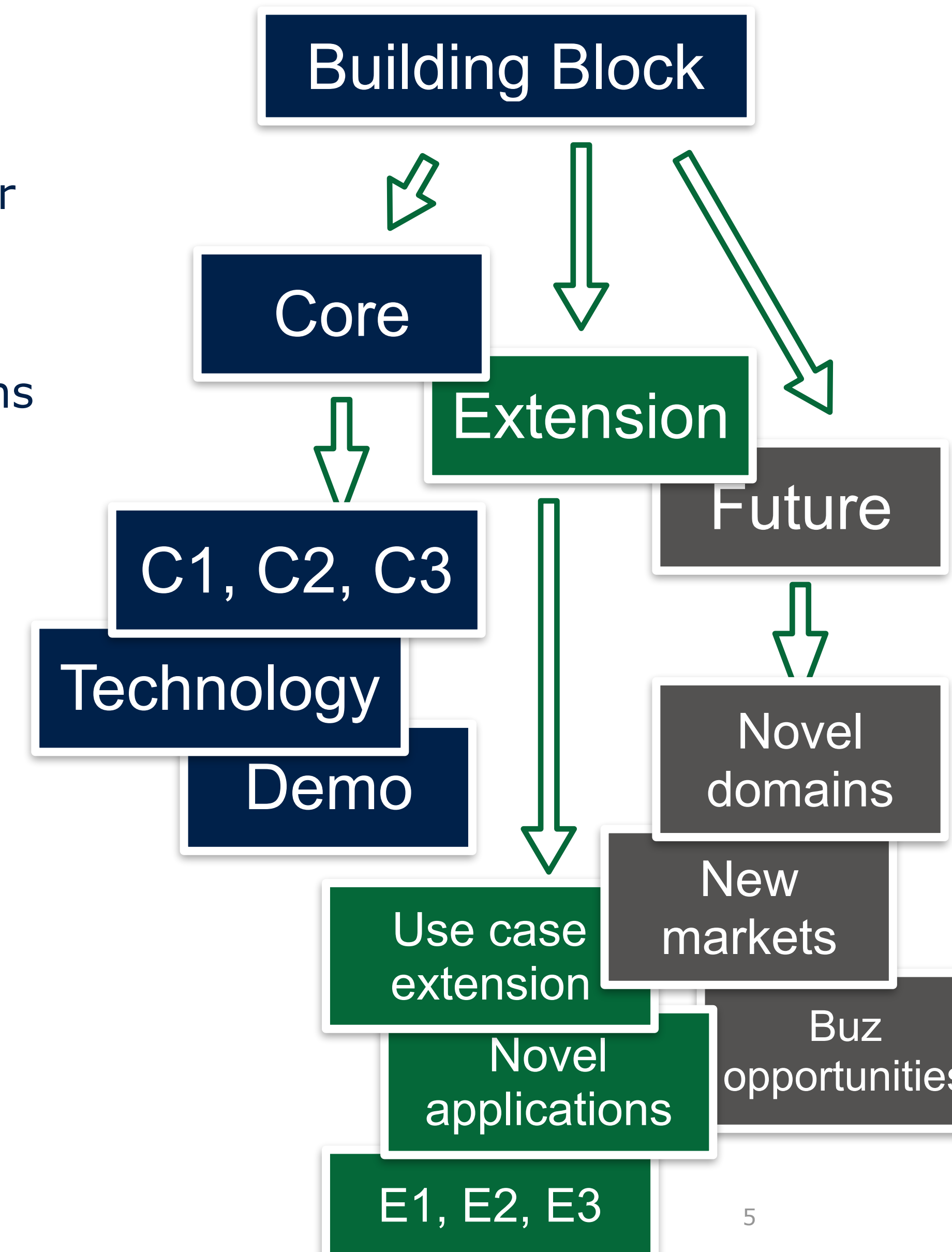
■ Impact

- **Security, privacy and trustability**
 - application specific routing, remotely configured secure channels
 - separation of traffic
- **Technology**
 - QoS of application
 - Cloud monitoring
 - machine learning QoS tools
 - E.1-E.3
- **Market**
 - enhanced efficiency in wireless
 - trustable products
 - future business line (IoT), F.1-F.3

Methodology of Building block inclusion

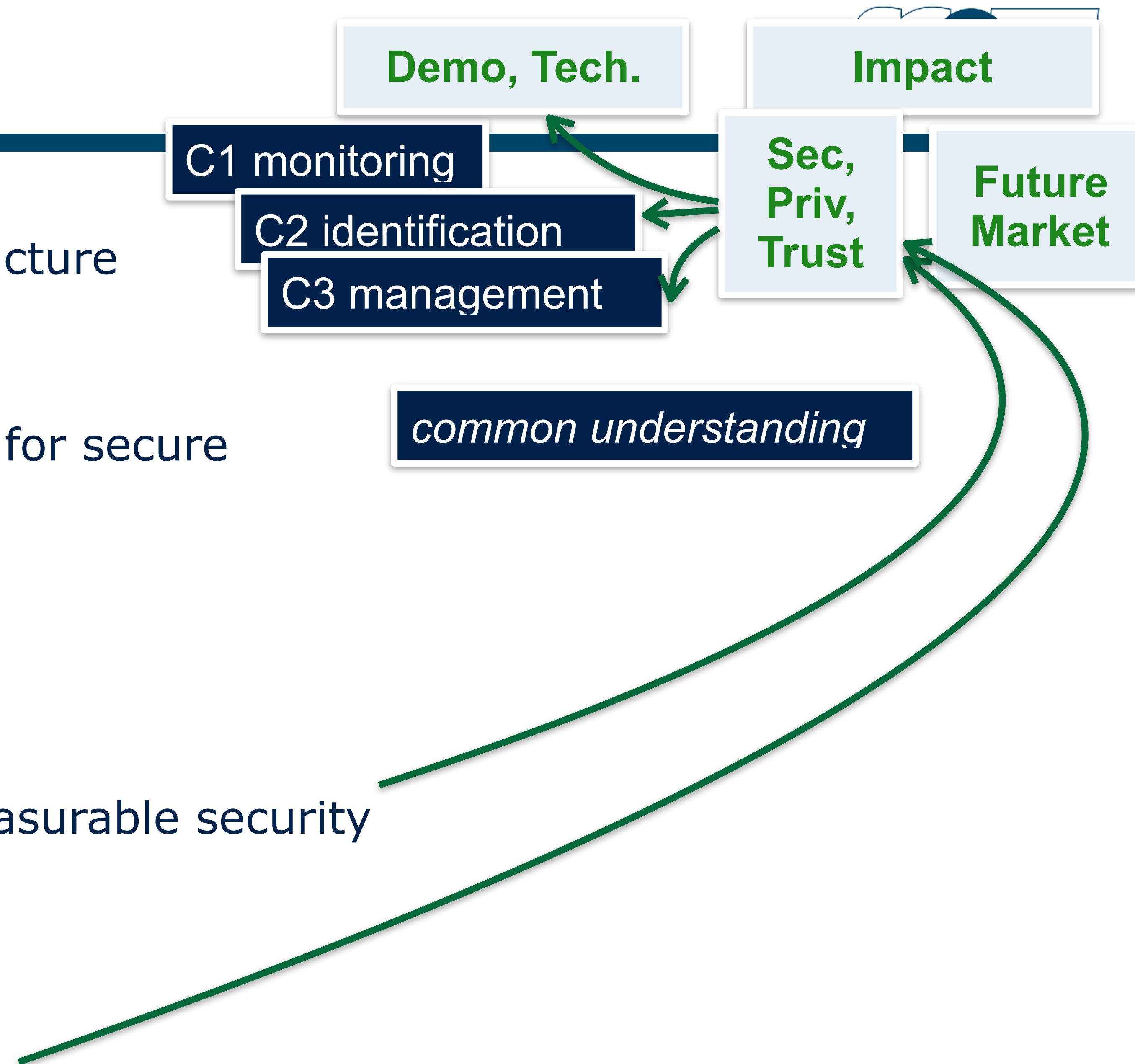
applied for WP8

- BB24.A - Remote configuration of infrastructure
- BB26.I - Semantic and ontology definition for secure wireless data transfer
- BB24.C - Application layer protocols and cloud architectures
- BB24.E - Cloud computing services for novel connected mobility applications
- BB24.L - Adaptable network slicing
- BB23.P - Spatial-based authorisation and authentication
- BB24.I - Semantic Attribute Based Access Control
- BB24.G - Mobile Edge Computing
- BB26.H - Measurement, modelling and emulation methods for wireless vehicular data links
- BB26.F - Multi-metrics assessment for measurable security and privacy
- BB26.G - Privacy labels (A-F)



Core use case applied for WP8

- BB24.A - Remote configuration of infrastructure
 - monitoring of home gateway
- BB26.I - Semantic and ontology definition for secure wireless data transfer
 - definition of security functionalities and attributes
- *assessed with help of*
- BB26.F - Multi-metrics assessment for measurable security and privacy
 - security classes, measurable security
- BB26.G - Privacy labels (A-F)
 - measurable privacy



Extended technologies

applied for WP8



- **BB24.L - Adaptable network slicing**

- 5G Slicing, service integration, service differentiation

E.1 routing

E.2 segmentation

E.3 slicing

F.1 slicing

Impact

Technology

Sec,
Priv,
Trust

Future
Market

- **BB24.I - Semantic Attribute Based Access Control**

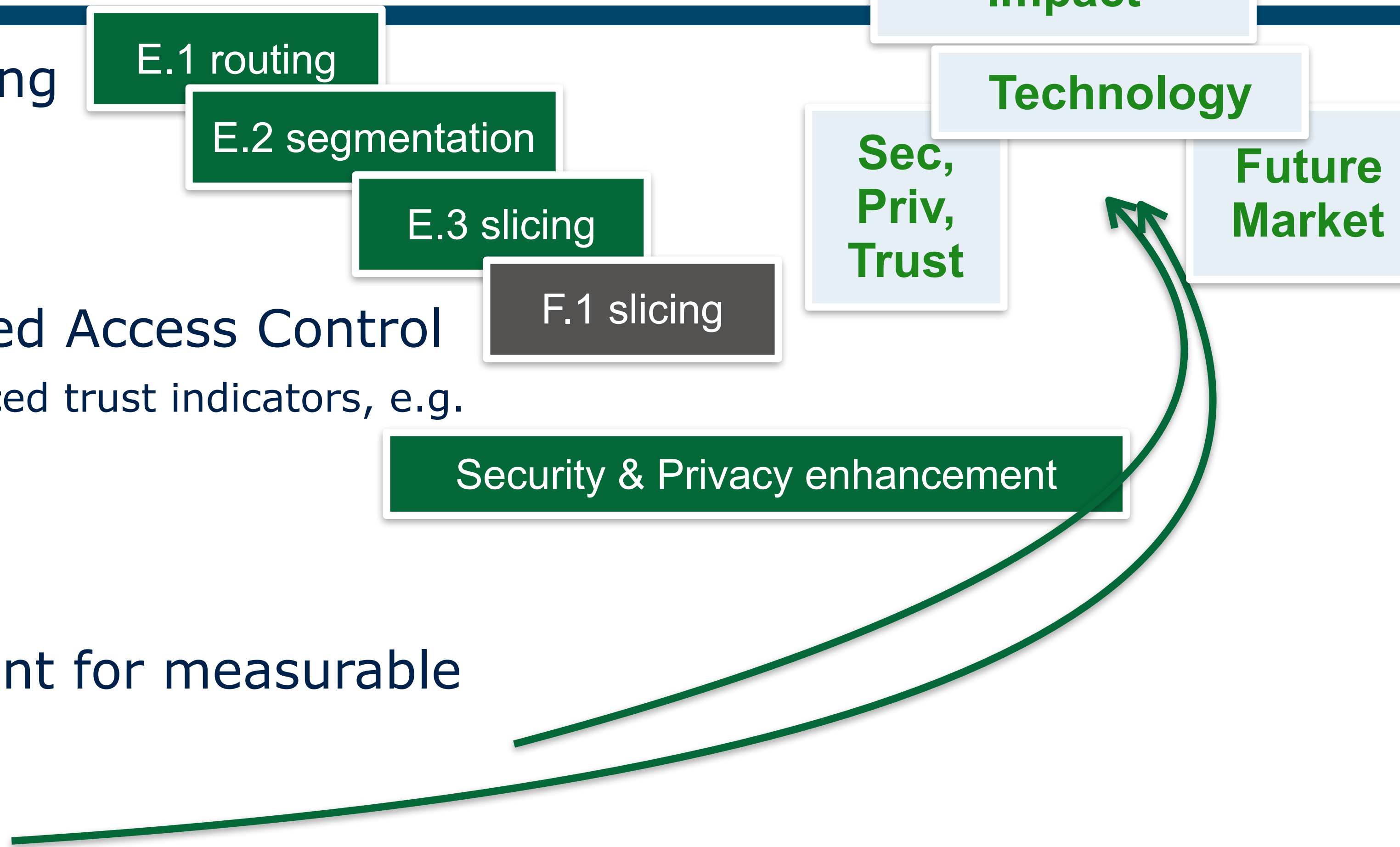
- increase of security class through enhanced trust indicators, e.g. network ID

Security & Privacy enhancement

- *assessed by*

- **BB26.F - Multi-metrics assessment for measurable security and privacy**

- **BB26.G - Privacy labels (A-F)**



Future Technologies applied for WP8

- BB24.C -Application layer protocols and cloud architectures
 - guidelines for communication protocols of sensors
- BB24.E -Cloud computing services for novel connected mobility applications
 - cloud based monitoring of sensors
- BB24.G - Mobile Edge Computing
 - edge computing for Wireless Sensor Networks
- BB23.P - Spatial-based authorisation and authentication
 - object identification and authorisation, e.g. handover and routing, safety
- ~~BB26.H - Measurement, modelling and emulation methods for wireless vehicular data links~~
 - ~~communication link measurements between vehicles~~
- *assessed by*
 - BB26.F - Multi-metrics assessment for measurable security and privacy
 - BB26.G -Privacy labels (A-F)

F.2 IoT gateway

F.3 IoT monitoring,
management

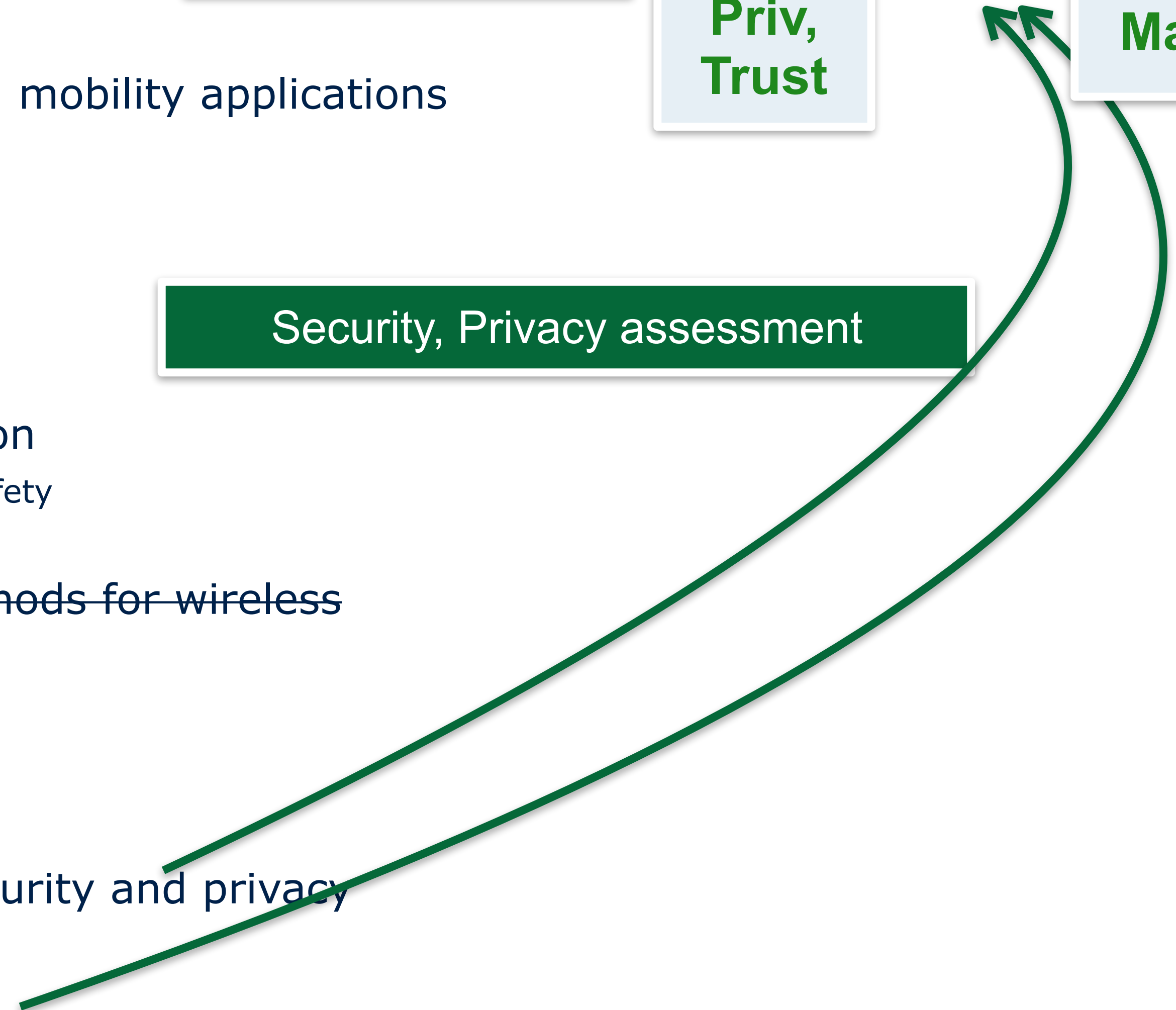
Impact

Technology

Sec,
Priv,
Trust

Future
Market

Security, Privacy assessment



Conclusion:

Methodology for including Building Blocks into Use Cases

■ SP2 Focus: Use cases

- focus on **core use cases** to demonstrate technology and market opportunities
- Identification of **core BB**, e.g. monitoring and management of wireless (C.1-C.3 in WP8)
- Enhanced technologies for making the use case stronger (E.1-E.3 in WP8)
- Future technologies for trustable products and future business (F.1-F.3 in WP8)
- demonstrate Security, Privacy enhancement
- **Market focus and Impact**

- enhanced efficiency in wireless
- trustable products
- future business line (IoT), F.1-F.3

■ SP3: Technology (Building Block dev.)

- Focus on building block development
- Addressing security enhancement of use cases
- Creating enhanced technologies
- Enabling future services and business
- **Technology examples**
 - QoS of application
 - Cloud monitoring
 - machine learning QoS tools