Device Connectivity Platform

Connecting products, phones, and clouds

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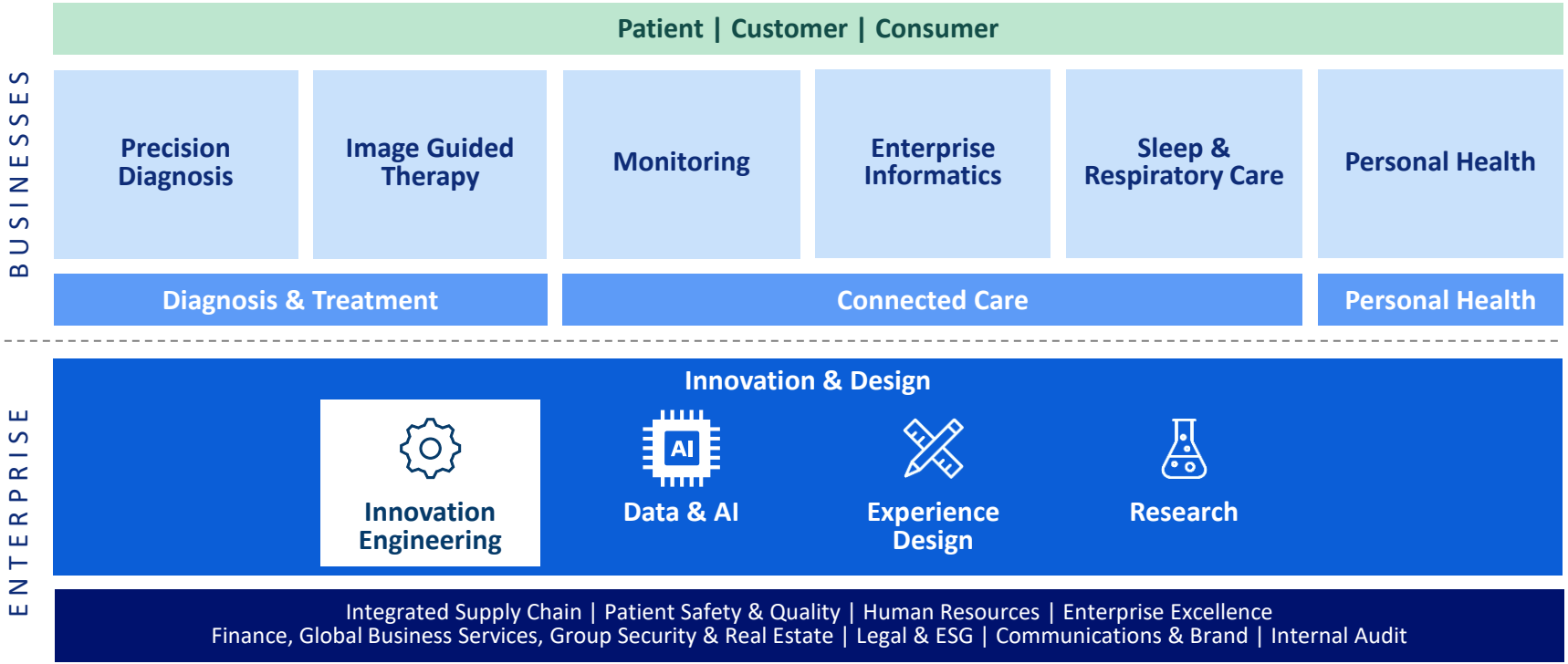
Innovation Engineering is an integral part of Philips' innovation organization



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Offers per Innovation Engineering Department

Product and System Engineering

Offers best-in-class engineering capabilities and innovation management services

Quality and Reliability engineering

Ensures product quality and reliability through the application of Systems Engineering methodologies, while delivering expert hands-on support

Software Engineering

Empowers BUs to accelerate Software enabled Innovations by delivering differentiating capabilities throughout the product lifecycle

System Platforms

Drives reuse of components and improves development efficiency and quality of the products and systems of BUs

Digital Innovation Platforms

Accelerates innovation in partnership with BUs on enterprise platform capabilities through enabling guardrails and optimized software delivery

Business Operations Office

Forges strong partnerships with BUs while enhancing IEN operations for simplicity, optimization, and agility

System Platforms

We drive reuse of components, focused on hardware and embedded software, and improve development efficiency and quality of the products and systems of the BU.

Platform management

Offering project and program management to design, deliver and maintain platforms. Driving cost benefits, supply assurance, quality and R&D efficiency across the lifecycle. Facilitating value and usage of assets through alignment with BU on roadmap and adoption.

Platform architecture

Collecting cross-functional requirements across Philips to create platform assets and tools that are maintained over lifetime.

Define and maintain the reference architecture.

Provide support through Subject Matter Expertise in the capability area of the platform.

System Platforms

- Device connectivity
- Electronic Design Automation (PCBA & Components)
- Battery
- Colors, Materials, Finishing
- Common Compute

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Device Connectivity Platform

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Connected products worked on so far









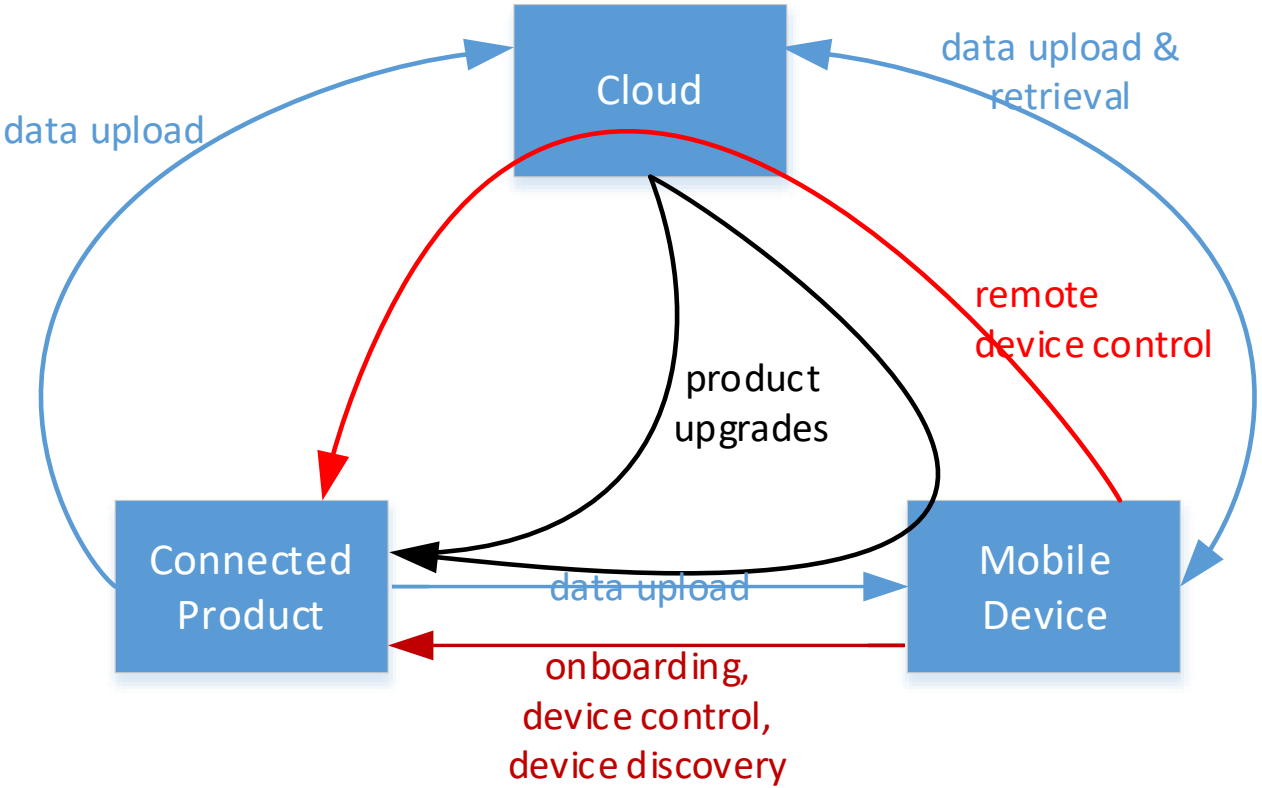




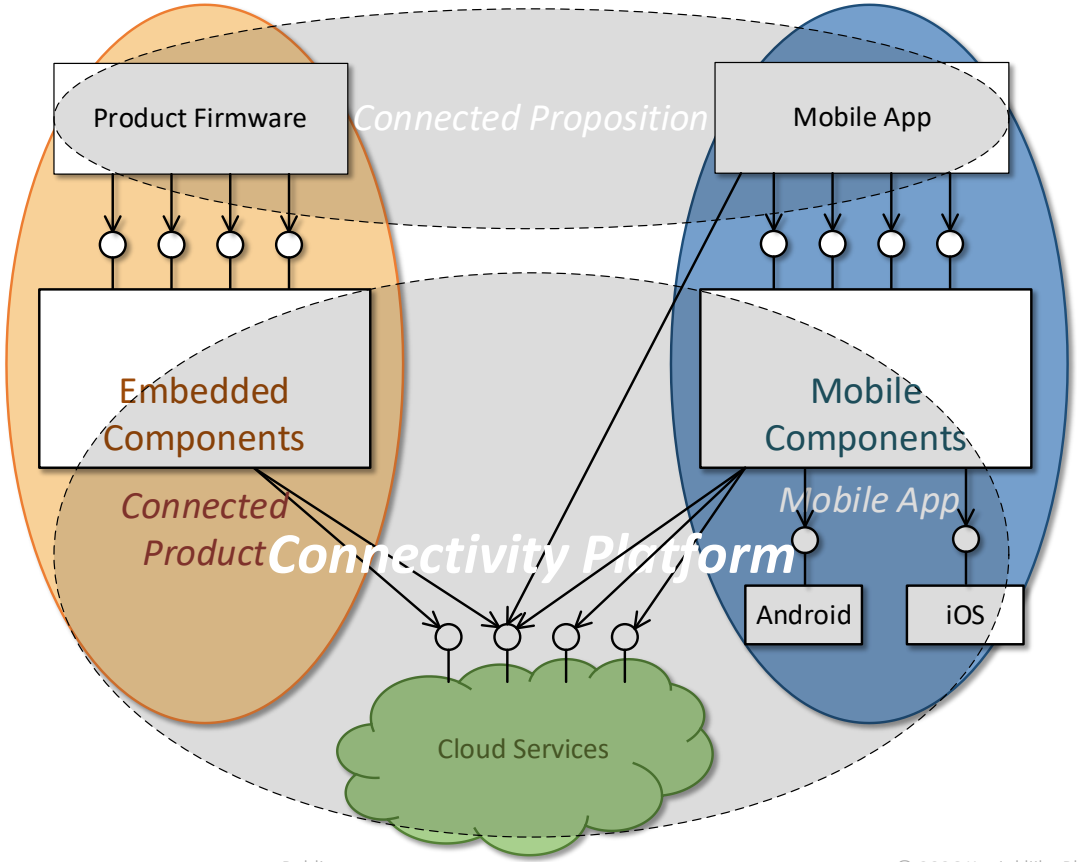




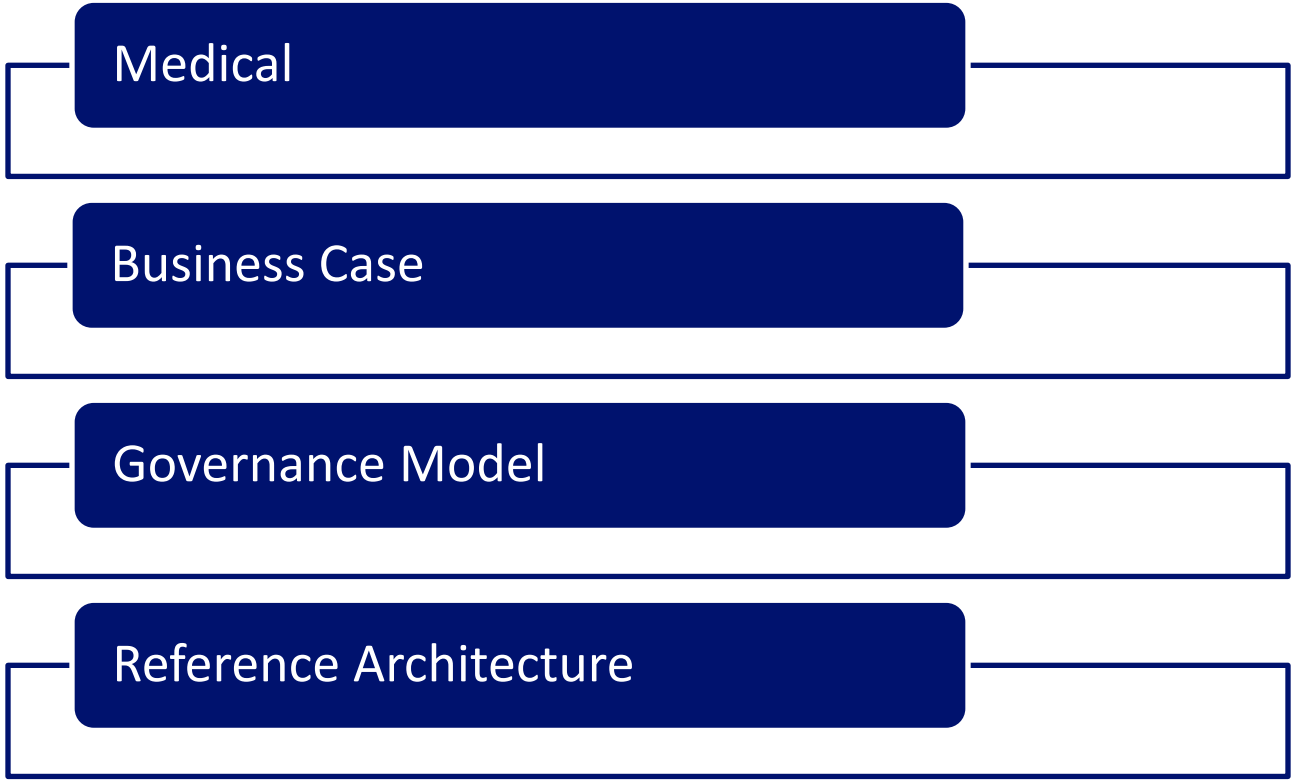
End-to-end features



From platform to product

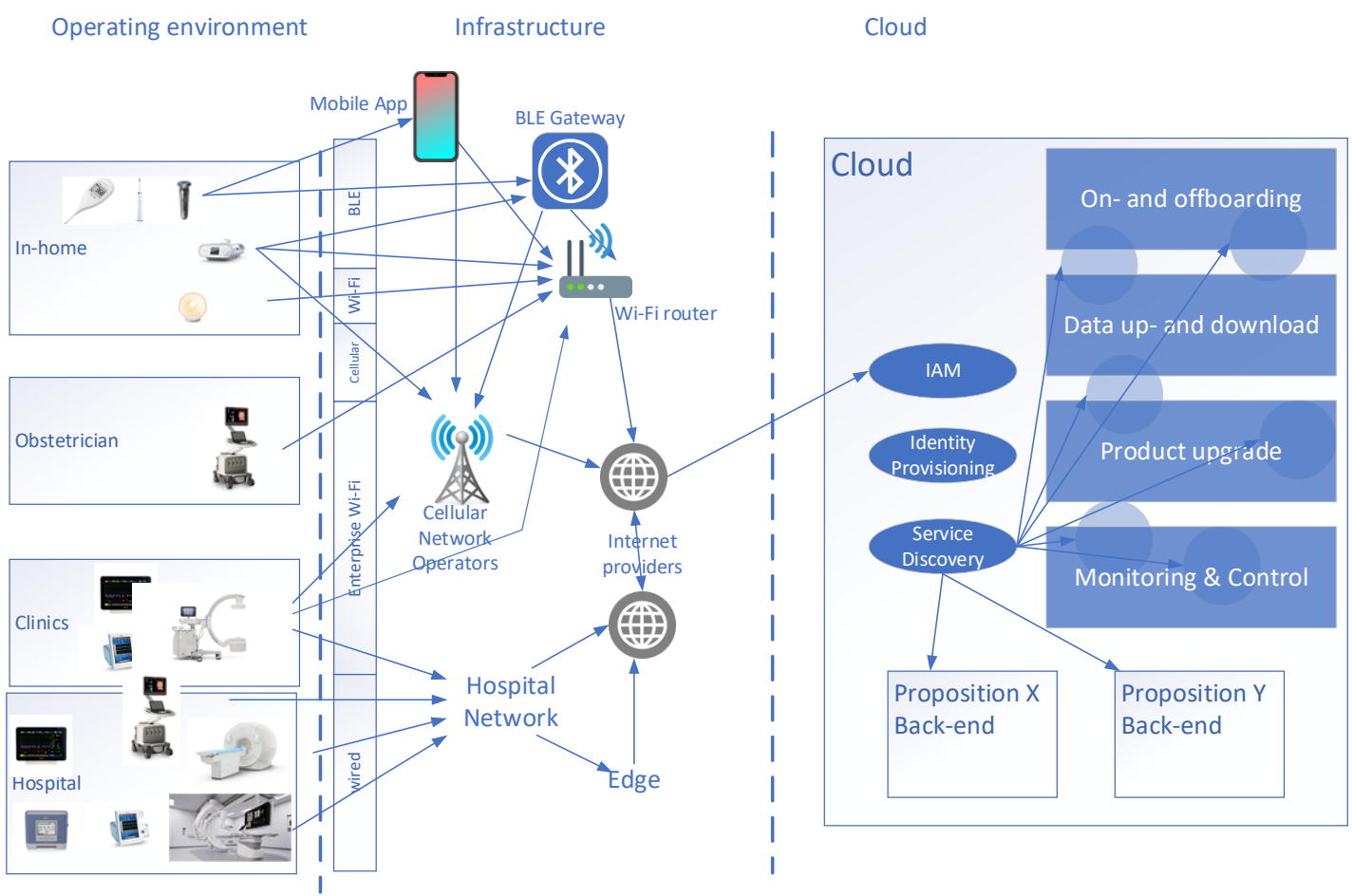


Platform aspects

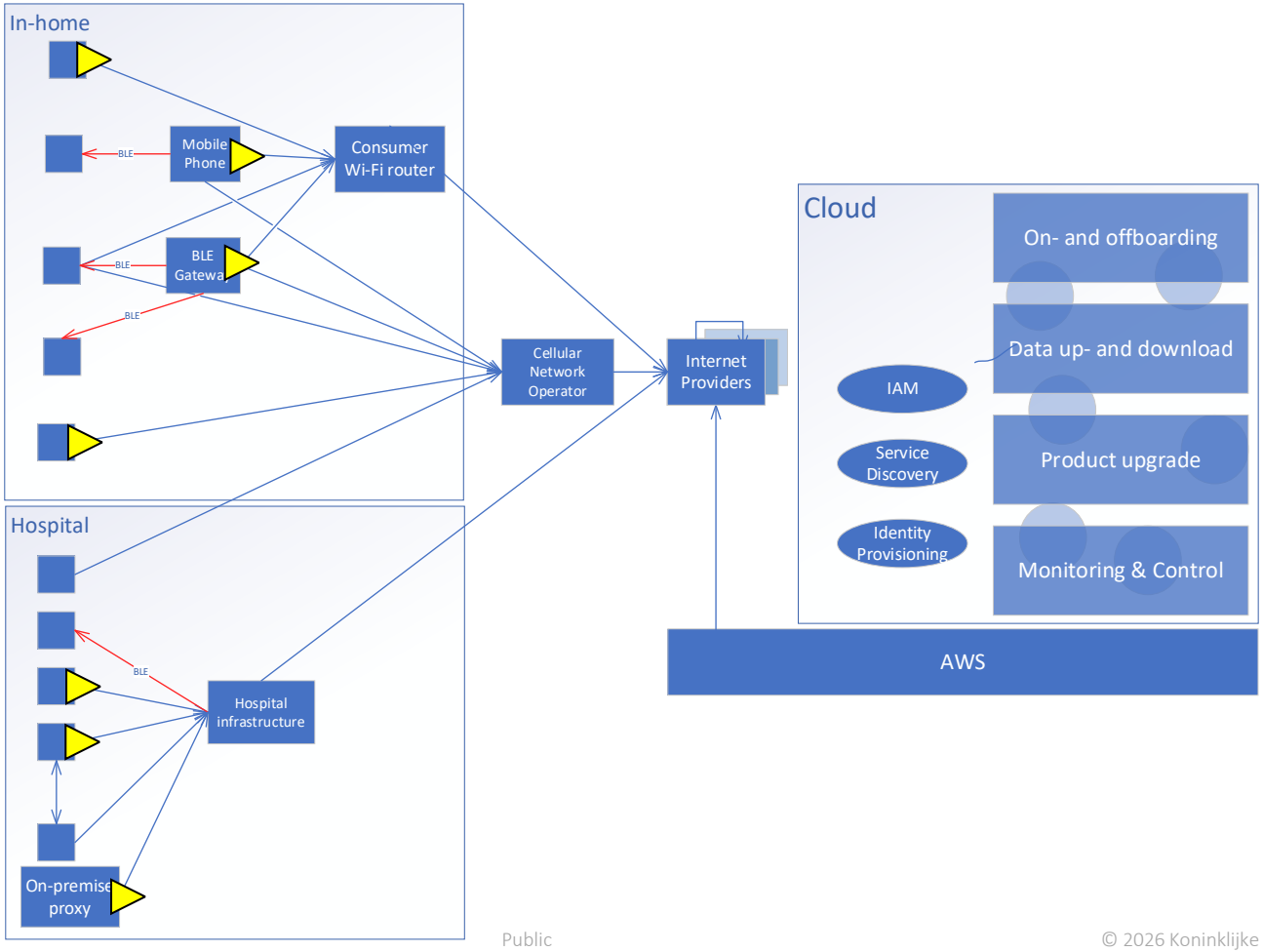


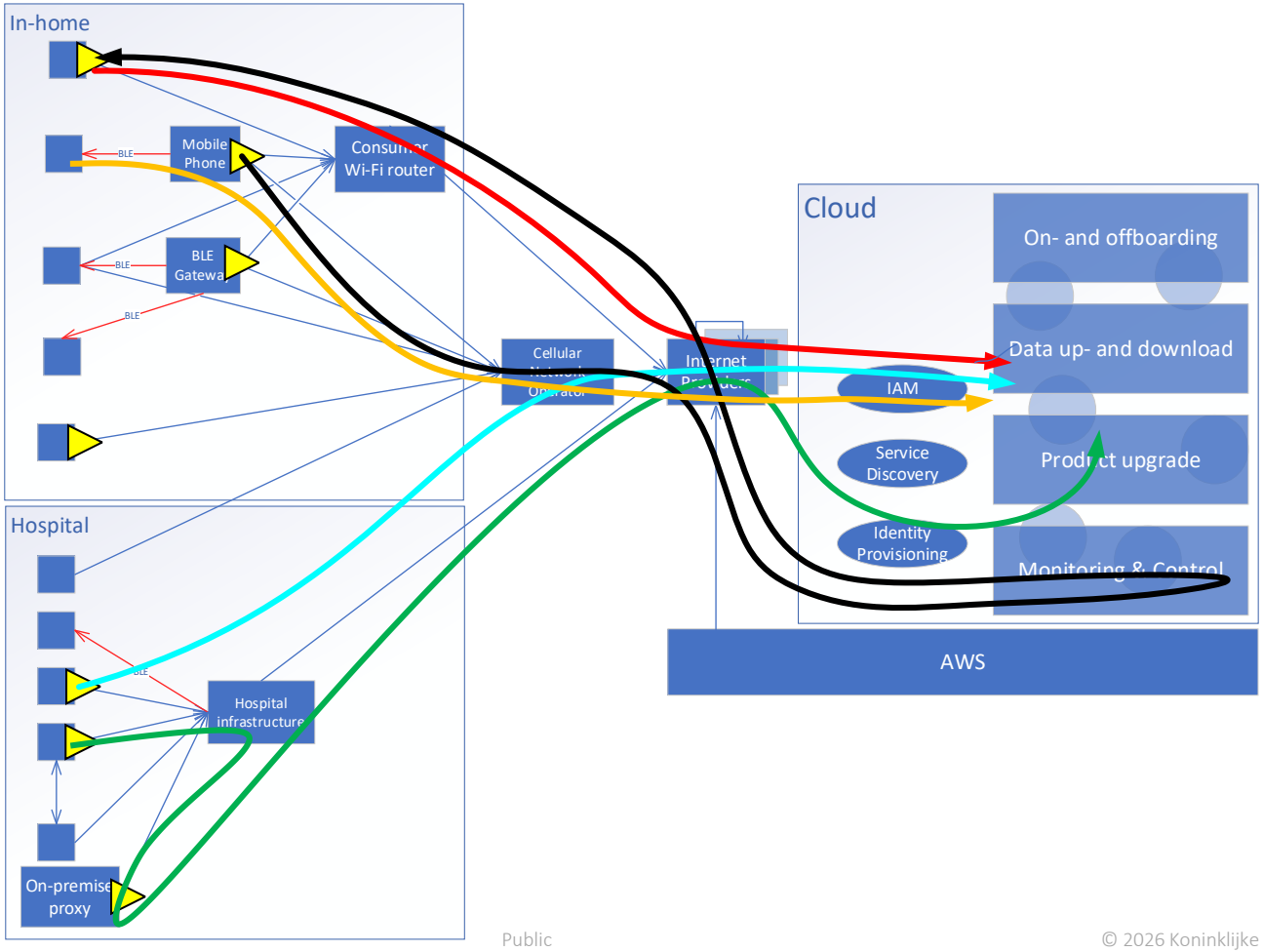
Reference Architecture

The playing field



	PH	CC	Hospital
Connectivity	BLE	Cellular	Ethernet
Life-time	5	10	11+
Servicing	none	usage/status (minimal)	System health Preventive maintenance
RAM	< 100 Kb	512 Kb and up	GBs
Flash	< 1Mb	2Mb	GBs
Data upload	0	100s of Kbs	Mbytes
Product upgrades	Once per lifetime	2-3?	Once per year
Power	Battery	Battery/mains	Mains
Architecture	Deep embedded	Embedded	MS/Linux





Wi-Fi data upload

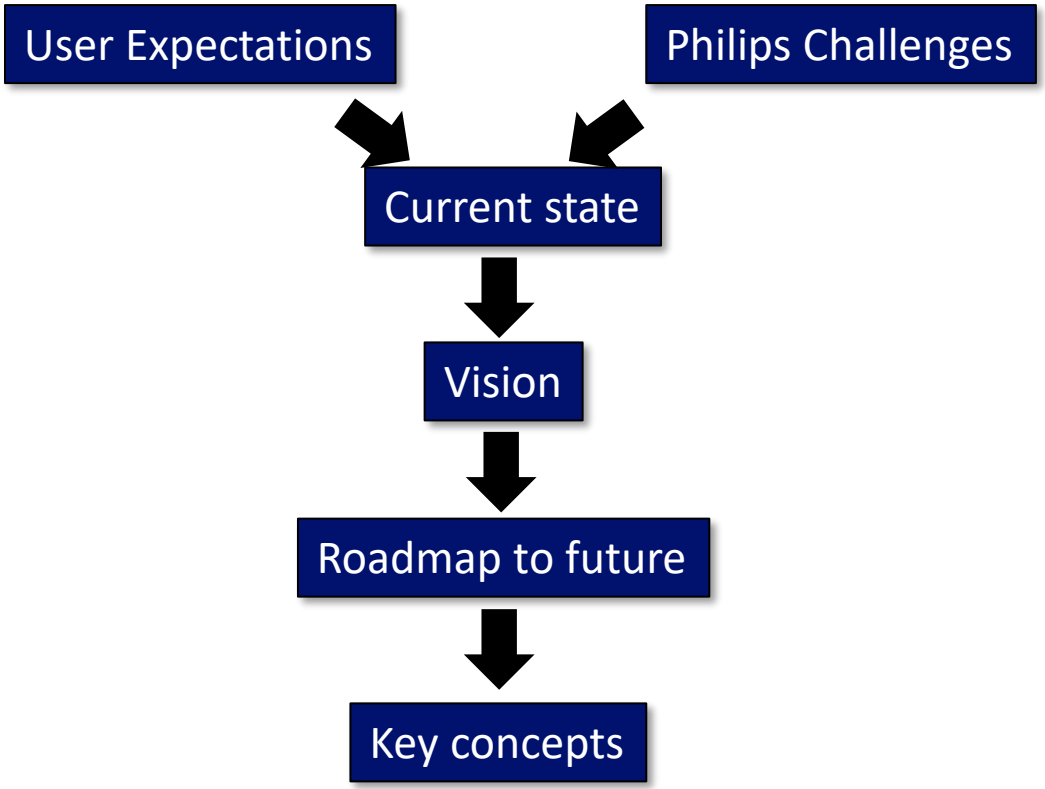
BLE upload through Mobile App

Remote control through cellular network

Using on-premise proxy

Cellular in hospital

Towards a reference architecture



Key concepts

Centralize

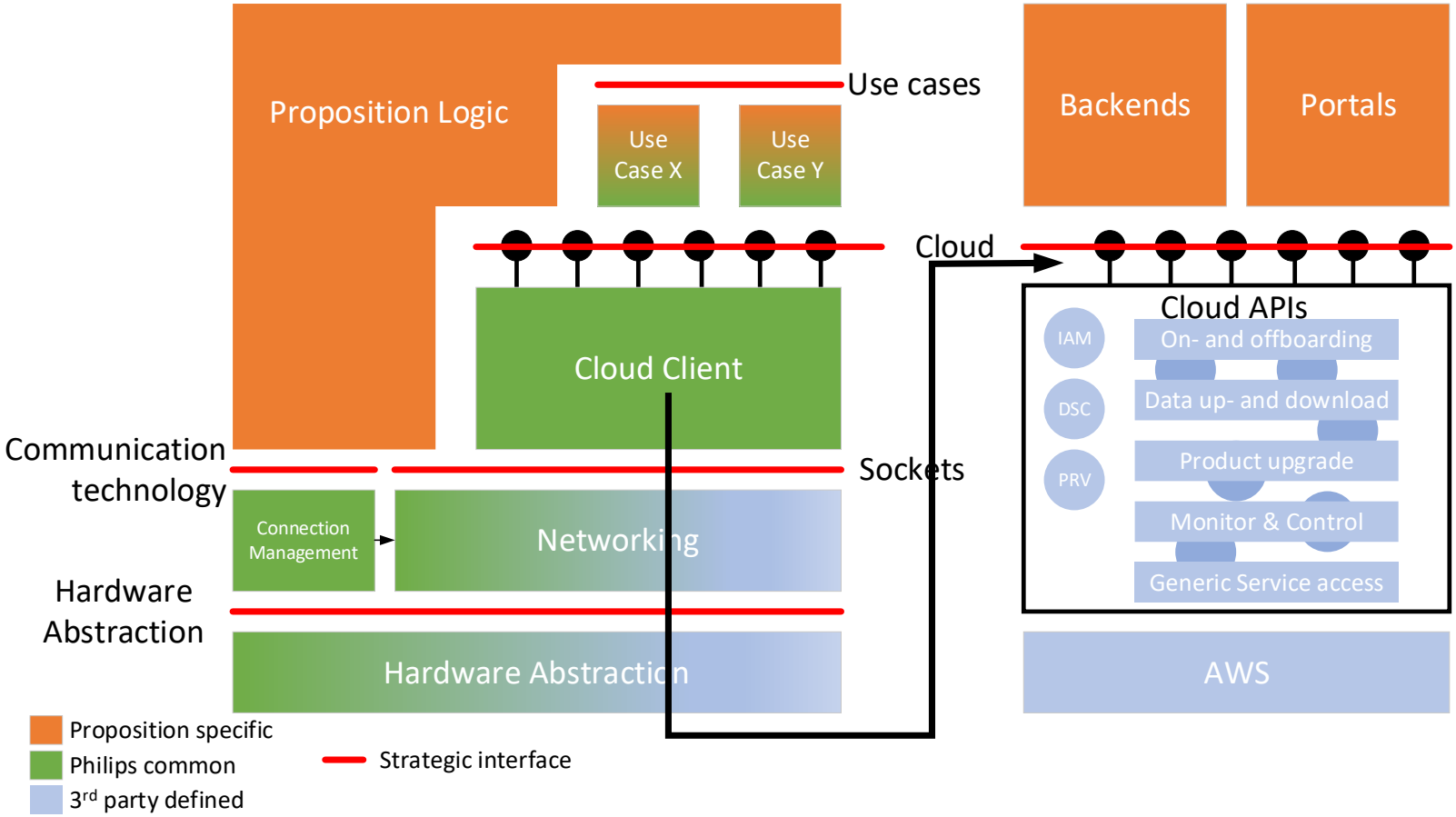
- Development & Maintenance
- Connectivity Competency

Re-use

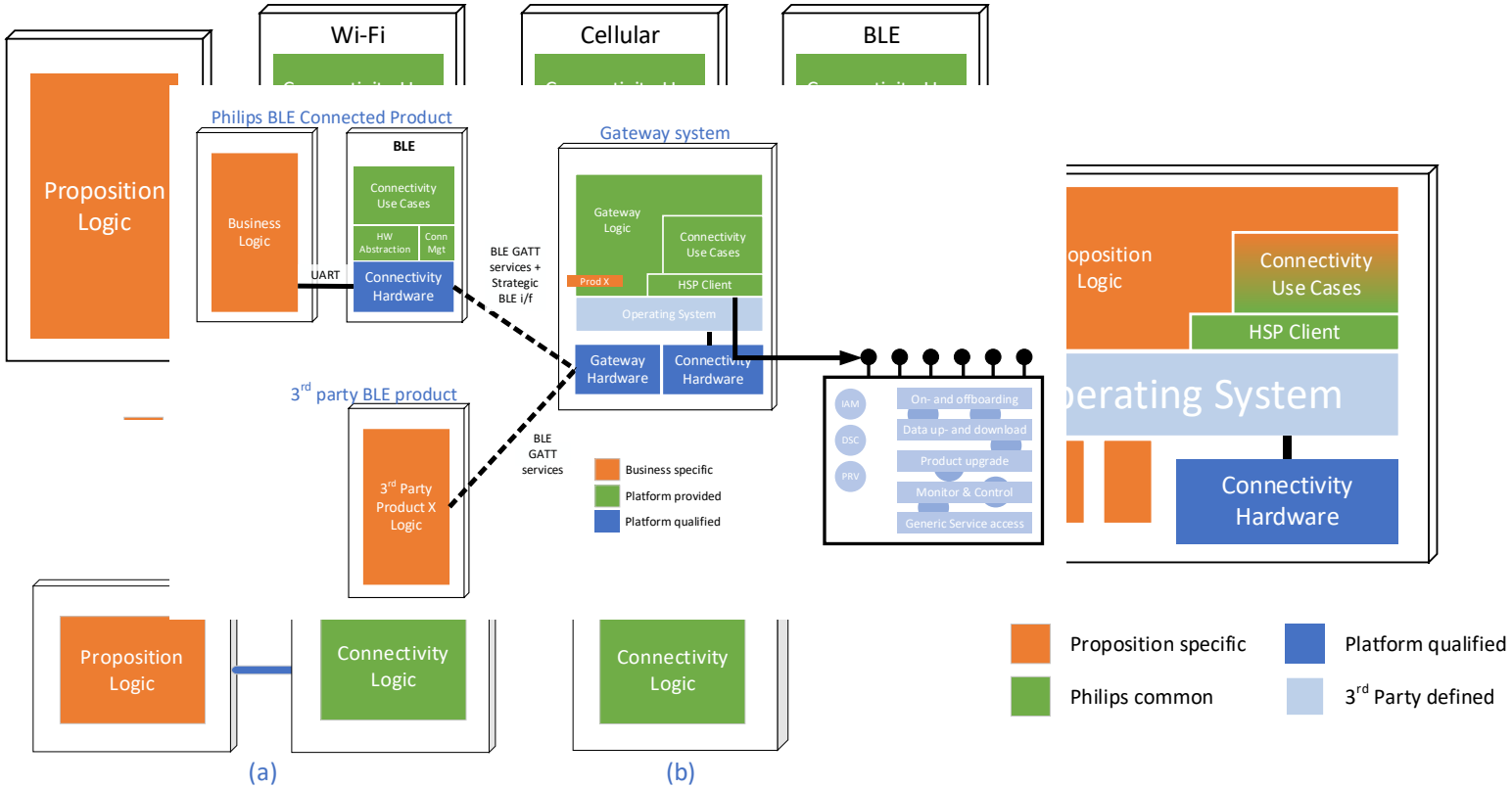
- Implement things once
- Re-useable connectivity components (HW & SW)
- Develop re-usable use cases

Manage strategic interfaces

- Towards hardware targets
- Towards connectivity technology
- Towards cloud services
- Towards re-usable use cases



Archetypes



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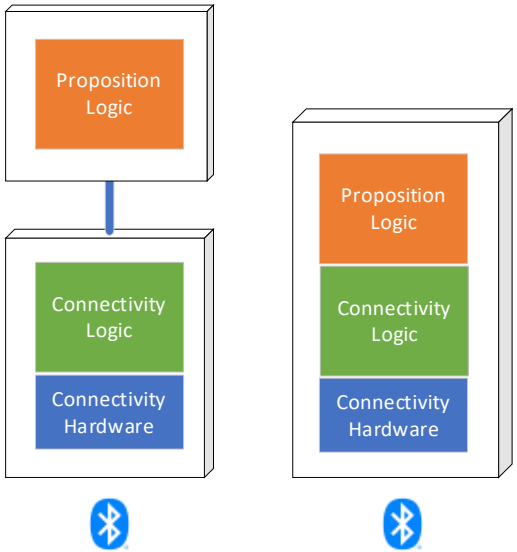
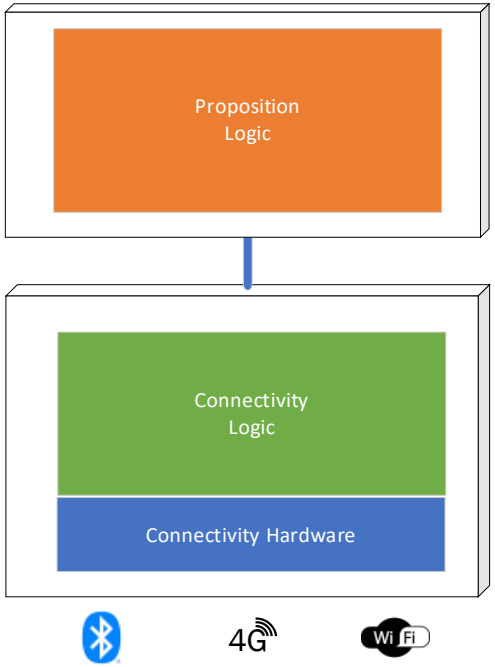
BLE Connectivity Nodes

Integrated & Off-loaded



Multi-nodes

Off-loaded



Future

- Optimizing platform releases
  - Needs of Consumer vs Medical businesses
- Optimizing hardware platform support
  - Zephyr
    - But the porting layer is not the main effort
- AI
  - Not (yet) in products
  - In the development processes we use

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Thank you