

2nd Future Internet Usage Areas Workshop



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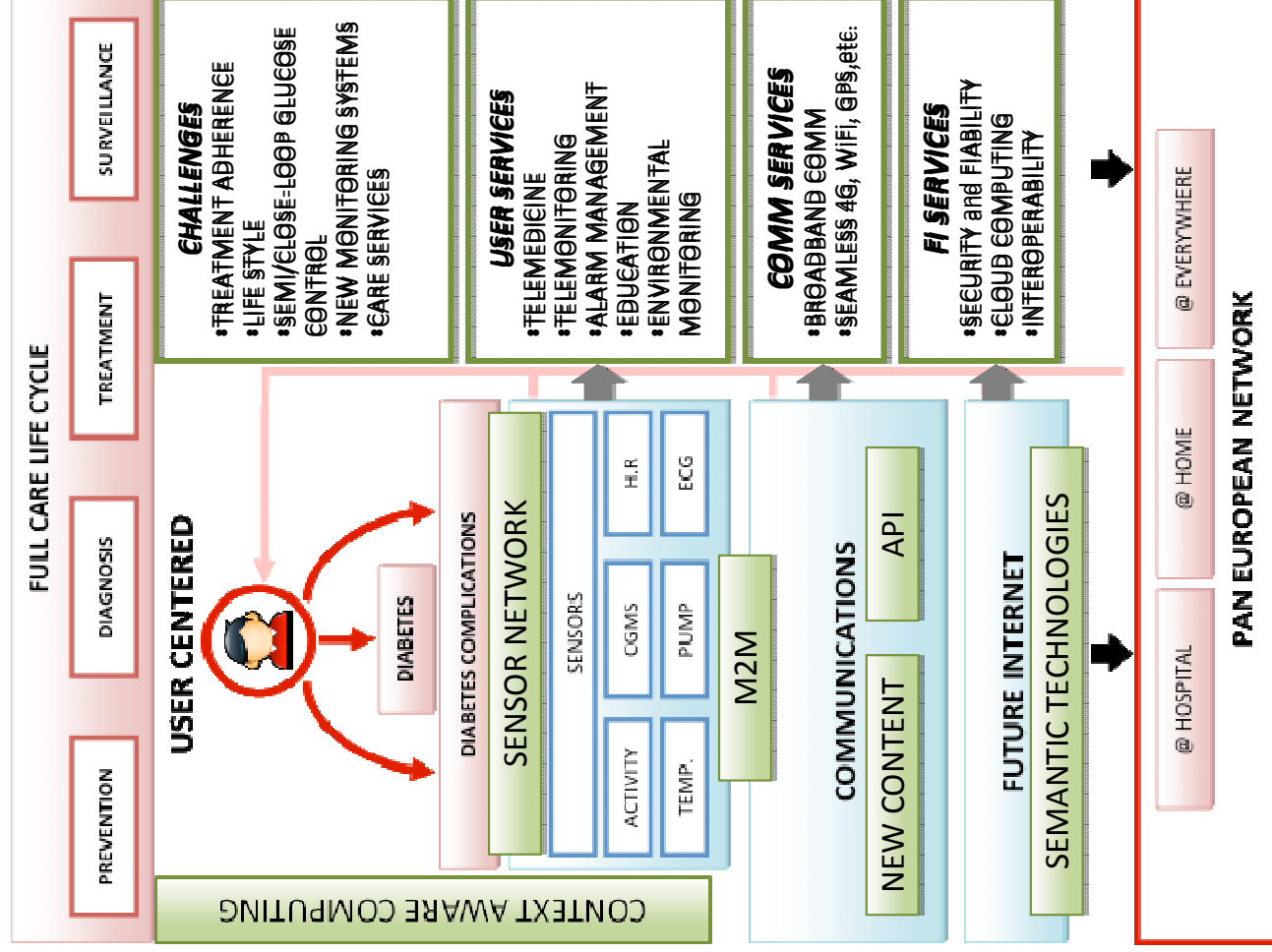
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Use case: Diabetes Management

- Diabetes is a chronic disease characterised by **improper production** or processing of **insulin**, the hormone that controls the metabolism of carbohydrates. The lack of insulin production leads to improper regulation of blood glucose.
- Two types of diabetes:
 - **Type 2** (90-95%): Characterized by increased insulin resistance. Commonly linked to obesity.
 - **Type 1** (juvenile onset diabetes): Occurs when the pancreas secretes little or no insulin as the result of an autoimmune disease (pancreatic β -cells destruction).
- **Complications**: high blood pressure, neuropathy, kidney disease, heart disease and stroke, retinopathy (eye disease), foot complications, ...
- The total number of people with diabetes in Europe is projected to rise from **55.2 million** people in 2010 to about **66.2 million** people in 2030.
- The cost burden of the diabetes pandemic in the EU is responsible in most countries for over **10%** of total health expenditure.
- **Patient groups**: diabetes & children, diabetes & adolescents, diabetes & obesity, diabetes & pregnancy, diabetes complications
- **Health professionals involved**: Endocrinologists, Family Practice, Nurses, Educators, Cardiologists, Internal Medicine, Nephrology, Neurology, Nutrition, Ophthalmology, Pediatrics, Podiatry, Psychology, etc...

Future Internet Functionalities



SHARED FEATURES WITH OTHER USAGE AREAS

Smart cities
Environment

Content
Transport and Mobility

Smart living

Entity potential role and environment

- Entity experience:
 - On Future Internet: (European)
 - “Experimental Update Less Evolutive Routing **EULER**” (FP7-ICT-2009-5)
 - “Together IP, GMPLS and Ethernet Reconsidered – Phase 2 **TIGER2**” (CELTIC)
 - On Diabetes:
 - Several national and international research projects (+1 M€ funding)
 - Industry partners: Medtronic, Dexcom, National Instruments
 - Hospitals: H. of Girona, H. Clinico Valencia, H. Sant Pau (Barcelona), Insespital (Bern)
- Infrastructure:
 - 4T Lab: Research infrastructure on Telemedicine.
 - Smart City
 - Smart Region
- Environmental needs (FI-PPP):
 - A Pan-European e-Health Knowledge Space
 - A Large-scale Collaborative Infrastructure for European Hospitals