



PREDICT 6G

SNS Stream B/D Joint Workshop on KPIs and KVIs

May 2024



**Funded by
the European Union**

This project was awarded funding by the European Union's Horizon Europe Research and Innovation programme under grant agreement N° 1101095890.

The vision of PREDICT-6G



E2E deterministic services over multiple networks with different technologies



E2E RELIABLE

High availability
Low (zero) packet loss
Failure resilient



E2E TIME SENSITIVE

Time-aware
Bounded latency
Low jitter



PREDICTABLE

Use of AI to predict events,
states, demands, resources;
Autonomous proactive actions

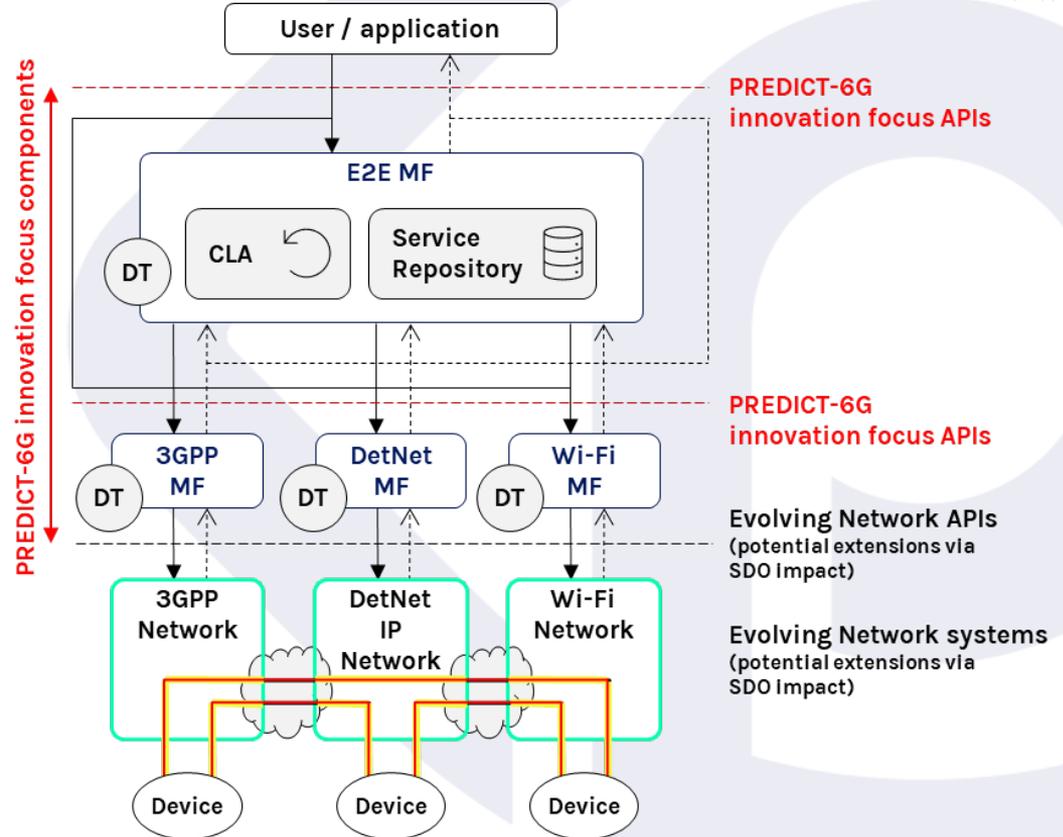
Reference Architecture

PREDICT-6G management scope

- Networks (e.g., PM/CM)
- Network services within one network (e.g., connectivity, det. SLA)
- E2E services over multiple networks (e.g., between devices attached to different networks)

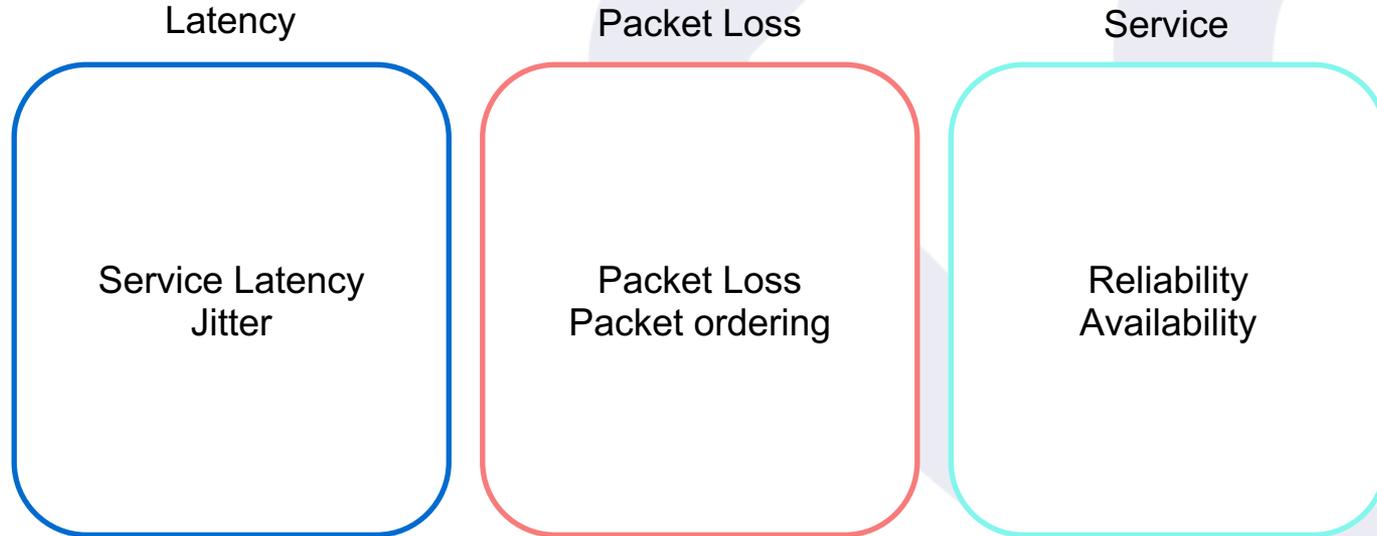
These are Managed Entities (ME) for the PREDICT-6G framework.

- E2E deterministic service flow (MDP)
- Request / configuration (AICP)
- Measurement / status / insight (AICP)



Project KPIs

- Project KPIs available at: [Deliverable 1.1](#)
- Focus on Latency (time-sensitiveness) and Service (reliability)



Project KPIs

Family	KPI	Description	Goal
Latency	Service Latency	Time required by a deterministic network to deliver an application packet when performing a specific end-to-end communication service.	[1-10] milliseconds
	Jitter	Difference in milliseconds between the 0 quantile (minimum) and the $1-10^{-3}$ quantile of the delay variation.	1 millisecond
Packet Loss	Packet Loss	Percentage of the packets lost during a period of time	$< 10^{-5}$
	Packet Ordering	Percentage of the packets in-sequence versus the total of packets in a deterministic network.	$> 99.9999\%$

Project KPIs

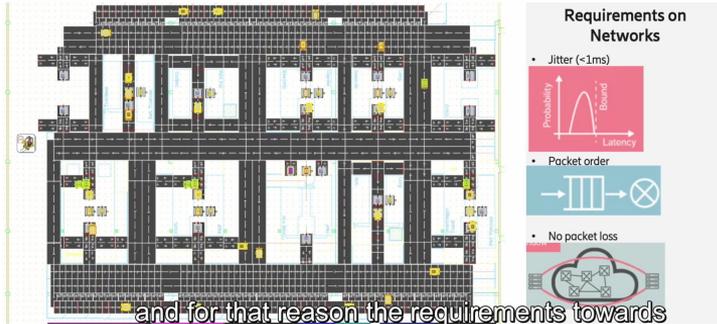
Family	KPI	Description	Goal
Service	Reliability	Reliability is the success probability of performing a deterministic end-to-end communication service within a given time interval in the context of a defined SLA.	> 99.9999%
	Availability	Percentage of time in which deterministic networks successfully operate in the context of a defined SLA	> 99.9999%

Project KVs

Family	KPI	Ongoing Work
Ecosystem	Business Value	Ongoing " Business impact and migration guidelines towards 6G scenarios" activity
	Economic Growth	
Innovation	Security	<p>Security resilience defined as the ability to adapt and recover from challenging and unforeseen situations.</p> <p>Ongoing work: Define an expected level and metric for the security resilience key value and map the combination and relevance of the related performance indicators into a value that represents security resilience.</p>

Results

Real World



and for that reason the requirements towards the communication networks are very hard.

Smart Factory

Industrial demo scenario



Each station is placed two metres apart vertically or horizontally from another station.

Target Wake Time



PREDICT 6G

Thank you!



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[PREDICT-6G Project](#)



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