S1-241016

# Views on IMT-2030

Agenda item: 8
Source: Apple

3GPP TSG-SA WG1 Meeting #106
Jeju, Korea, 27 - 31 May 2024

# SA1 Work planning

# SA1 Rel-20 “Part 2” study planning

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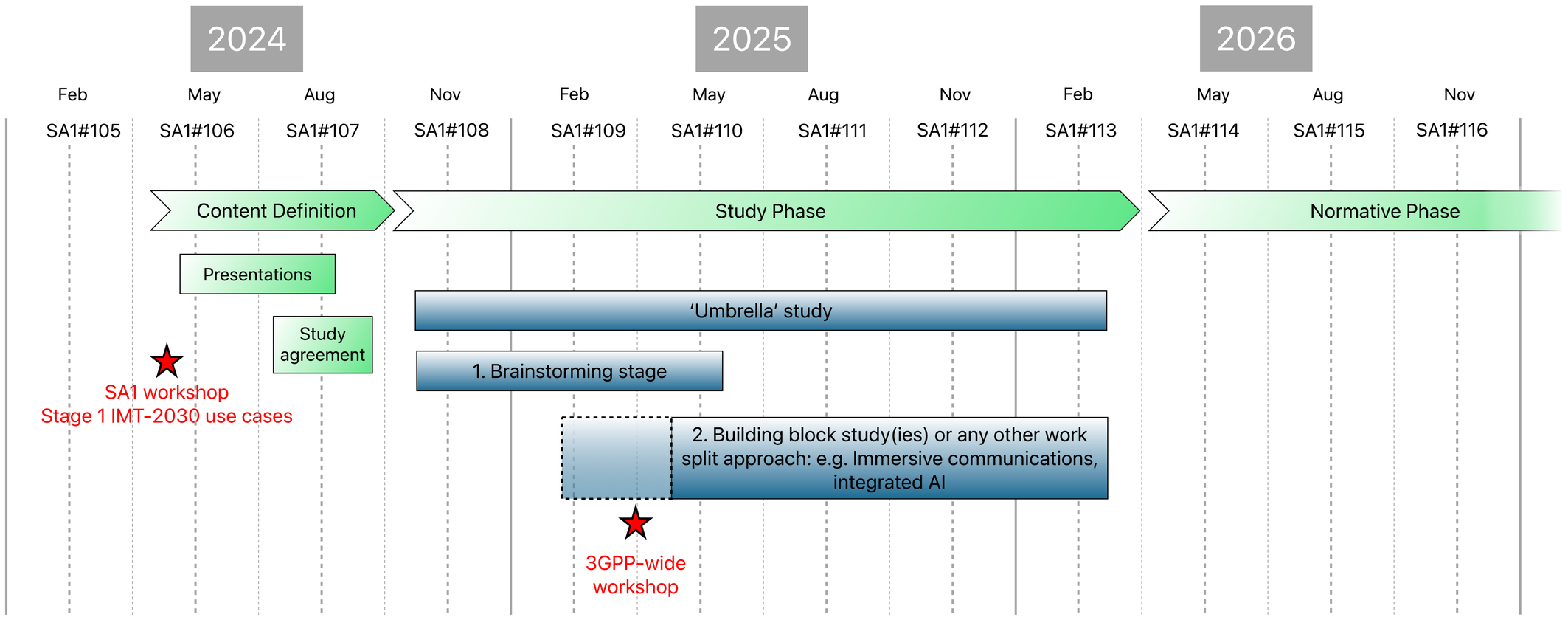


SA1 Study stages of work:

1. Brainstorming stage - to collect all high level ideas
2. Focus on specific ‘blocks’ to develop requirements further

# SA1 Study Phase: Work Split Options

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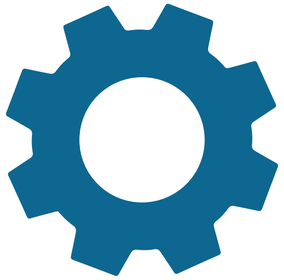
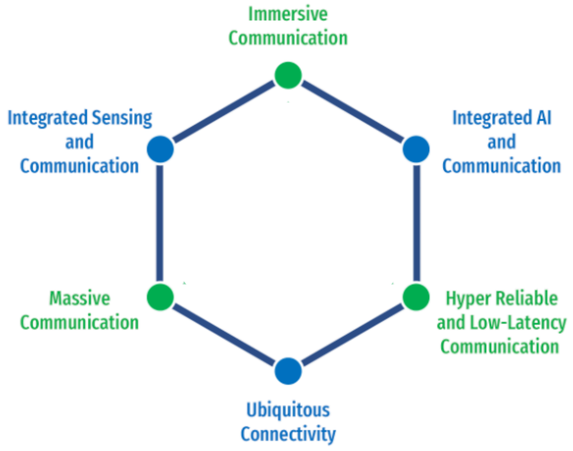
1

**Single ‘umbrella’ study**
All-in-one approach



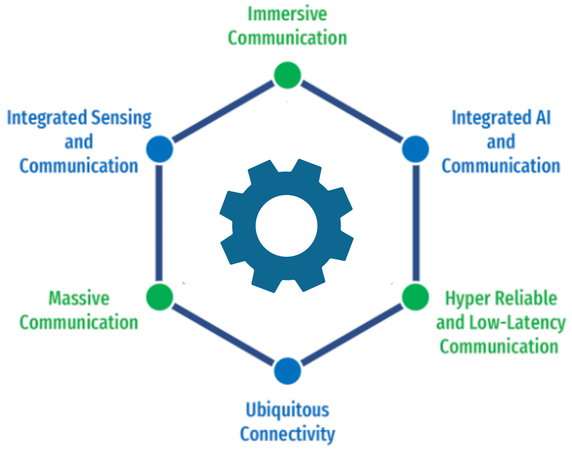
2

**Multiple studies**
(e.g. one per usage scenario)



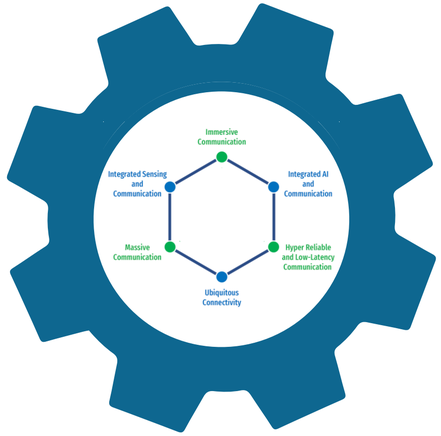

3

**Combination**:
Single ‘umbrella’ study
+
Multiple ‘Building block’ studies
(e.g. one per usage scenario)




4

**Hybrid**:
Single ‘umbrella’ study (single TR)
+
Separately managed ‘chapters’
(e.g. one per usage scenario)



# Other considerations for SA1



- Is there a possibility to 'phase' work into e.g. 2 normative releases?
  - What are the Day 1 features / capabilities that need to be included in Rel-21?
  - Any topics that could be studied in more detail later (e.g. in Rel-21 with normative work in Rel-22)?
- What features / capabilities of 5G and / or other legacy systems need to be supported? Everything?
- When is SA1 output needed by e.g. SA2, RAN WGs? What level of details are needed in requirements?
- How to take into account validity / market interest for proposed use cases? For example, better justification included in the use case background
- KPIs: SA1 has very detailed KPIs (e.g. sensing - false alarm, missed detection, refresh rate, confidence level) - could the number of future KPIs be reduced to key parameters (e.g. sensing resolution)?

# Motivation

# Observations on 5G: SWOT analysis



## Strengths:

- Improved KPIs from 4G
- Higher capacity than 4G
- More energy efficient per bit than 4G
- Ambition of flexibility and configurability

## Weaknesses:

- Complexity: due to multiple options to solve a single problem and the related configurability
- Capacity: degraded user experience in a loaded network
- Coverage: inadequate user experience at cell edge
- Power: very high power consumption

## Opportunities:

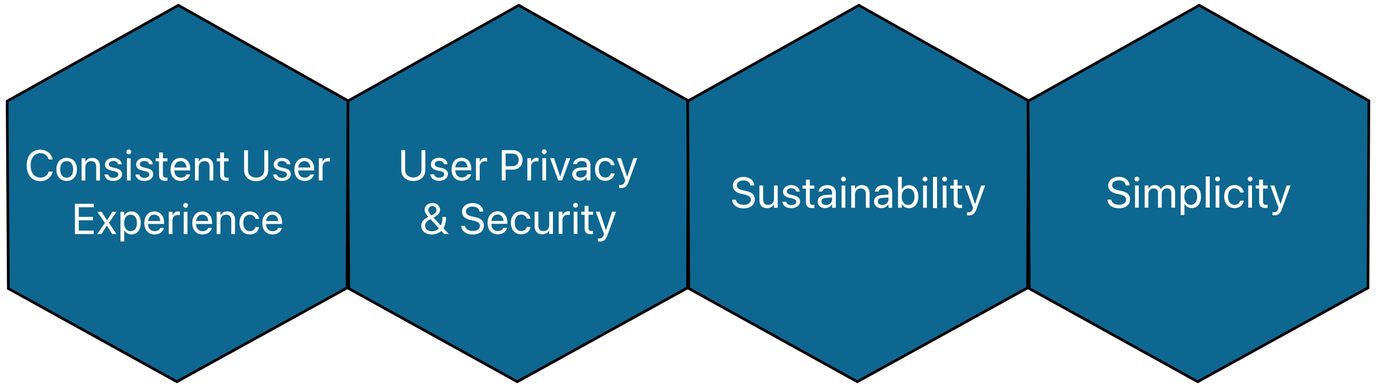
- Opens up new business opportunities
- Supports various vertical industries
- Adapts to the application and usage (via network slicing)
- Enhances MBB experience

## Threats:

- Capabilities hyped beyond what could be delivered
- Limited success beyond the consumer market
- For consumers, lack of differentiation with 4G
- Slow rollout of 5G SA core

# Guiding Principles





# Key Areas of Interest



## Services to the End User

- Immersive Communications
- Native Voice

## System Functionalities

- Satellite
- AIML

## System Capabilities

- Holistic Energy & Power Efficiency
- Achievable & Observable KPIs
- Consolidated Privacy Framework
- Next Generation Security Architecture
- Device Type

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