

UiO  **Department of Technology Systems**
University of Oslo

**“Digital Inclusion for a Better World”, Tsinghua
University, 8Mar2021**

Digital Inclusion and Societal Challenges

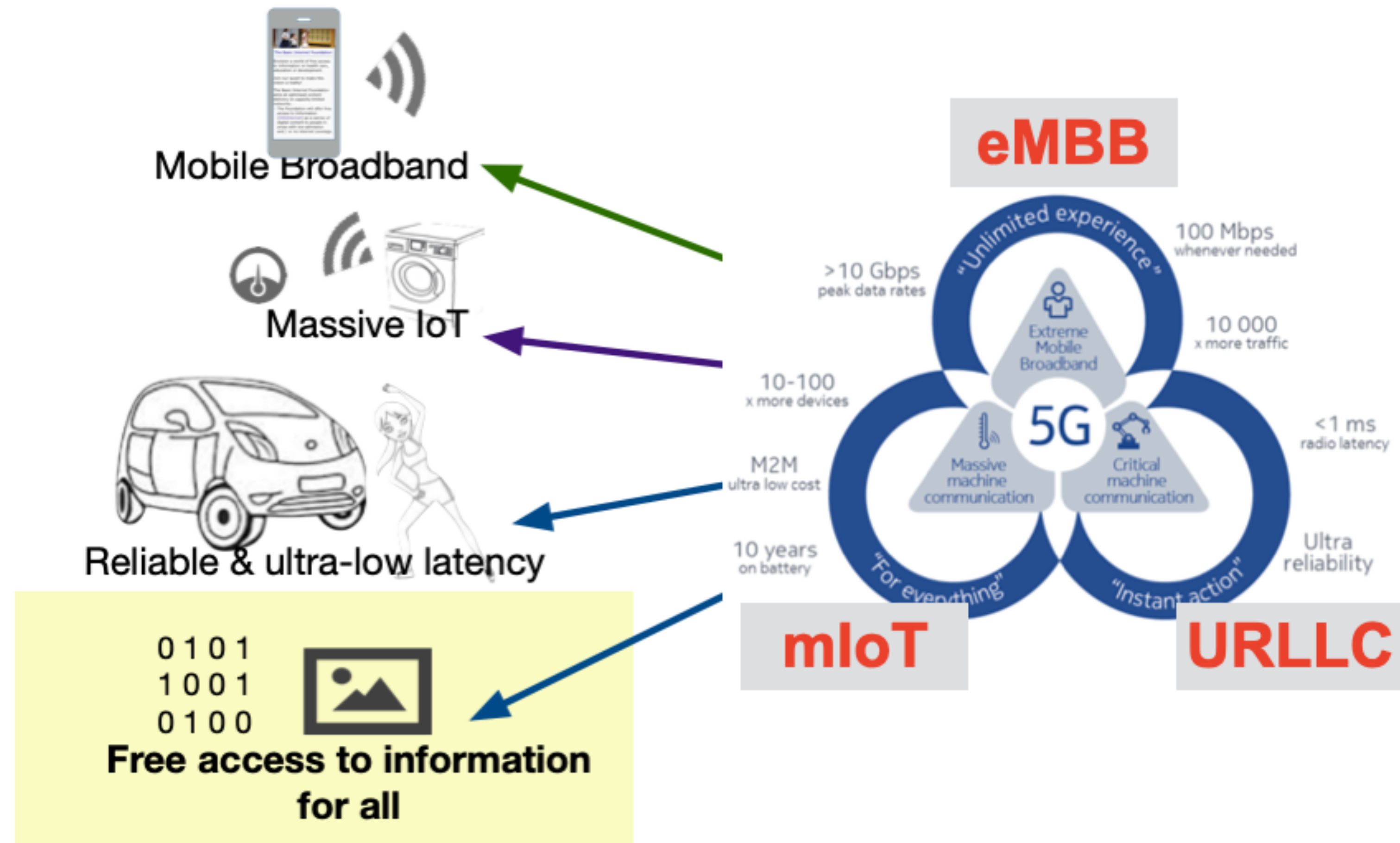
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5G - what is missing

- #5GforAll
- Rural coverage
 - Large cell,
 - low OPEX sites (low density)
- freemium model for access
 - free for information
 - premium for the full web



Public Opinion on SDGs (afrobarometer.org)

- Priorities by people in Africa
- decent work
 - zero hunger
 - good health
 - ...



Starting Point:

JOSEPH E. STIGLITZ

WINNER OF THE NOBEL PRIZE IN ECONOMICS

THE PRICE OF INEQUALITY

HOW TODAY'S DIVIDED SOCIETY
ENDANGERS OUR FUTURE

Reality of the Digital Divide

→ “Boys have the toys”

- digital divide in both devices
 - Example Smartphone ownership: 33% male, 16% female (Bangladesh)
- mobile broadband access

→ Costs of Access

- School connectivity (SDG indicator 4.A.1)
 - TZ: ~3% of schools are connected to Internet
- Digital Health for primary health facilities
 - <1% of primary health facilities have Internet (TZ)
- Community involvement/digital transformation

“Internet had the ability to dismantle the divide. Internet failed miserably, the divide is bigger than ever.”
Kate Gilmore, Human Rights, UNO

CAPEX

OPEX



Providing 6G for All

- ➔ **Free access to Information** (Internet Lite)
 - 1) Access - one **Information Spot** per village
 - 2) Skills - Health, Education, Agriculture
 - 3) Regulations - Freemium model
 - 4) Inclusion -
Free access for all #LeaveNoOneBehind
- ➔ Internet Lite & **Freemium** model for access
 - **free access to National Knowledge Portal** for all
 - **premium** access to **broadband**
 - sustainable solution

+18 dB
>20 km

“Providing Internet to the basic of the pyramid isn't a question of affordability, but rather a question of sustainability”
Internet Governance Forum, Panel, WIN

At least
one **Information Spot**
per village

Addressing Education 5.0 and Global Challenges

- Cognitive skills
 - literacy and numeracy
 - critical thinking
 - problem solving

Edu 3.0

- Social and emotional skills
 - empathy, teamwork
 - leadership, cultural awareness
 - fraternity & social friendship

Edu 4.0

- Global challenges
 - Climate, Sustainability (SDGs)

Edu 5.0

