





# **IMT-2020 REQUIREMENTS & USE CASES: The case for IMT-2020 in developing countries**

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## Key areas of network study: **Softwarization**

- **Softwarization**: Designing, implementing, deploying, managing and maintaining networks using software
- Exploits characteristics such as flexibility and rapidity of design
- Softwarization creates conditions that enable the re-design of network and service architectures
- Optimization of costs and processes, self-management



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## Key areas of network study: **Slicing**

- **Slice**: Unit of programmable resources, e.g., network, computation, storage
- Allows logically isolated network partitions
- Slicing is envisaged to cover a wide range of use cases with one network, e.g., one slice for voice communications, a separate slice for automated driving



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**Key areas of network study:**

# **Architecture enabling convergence**

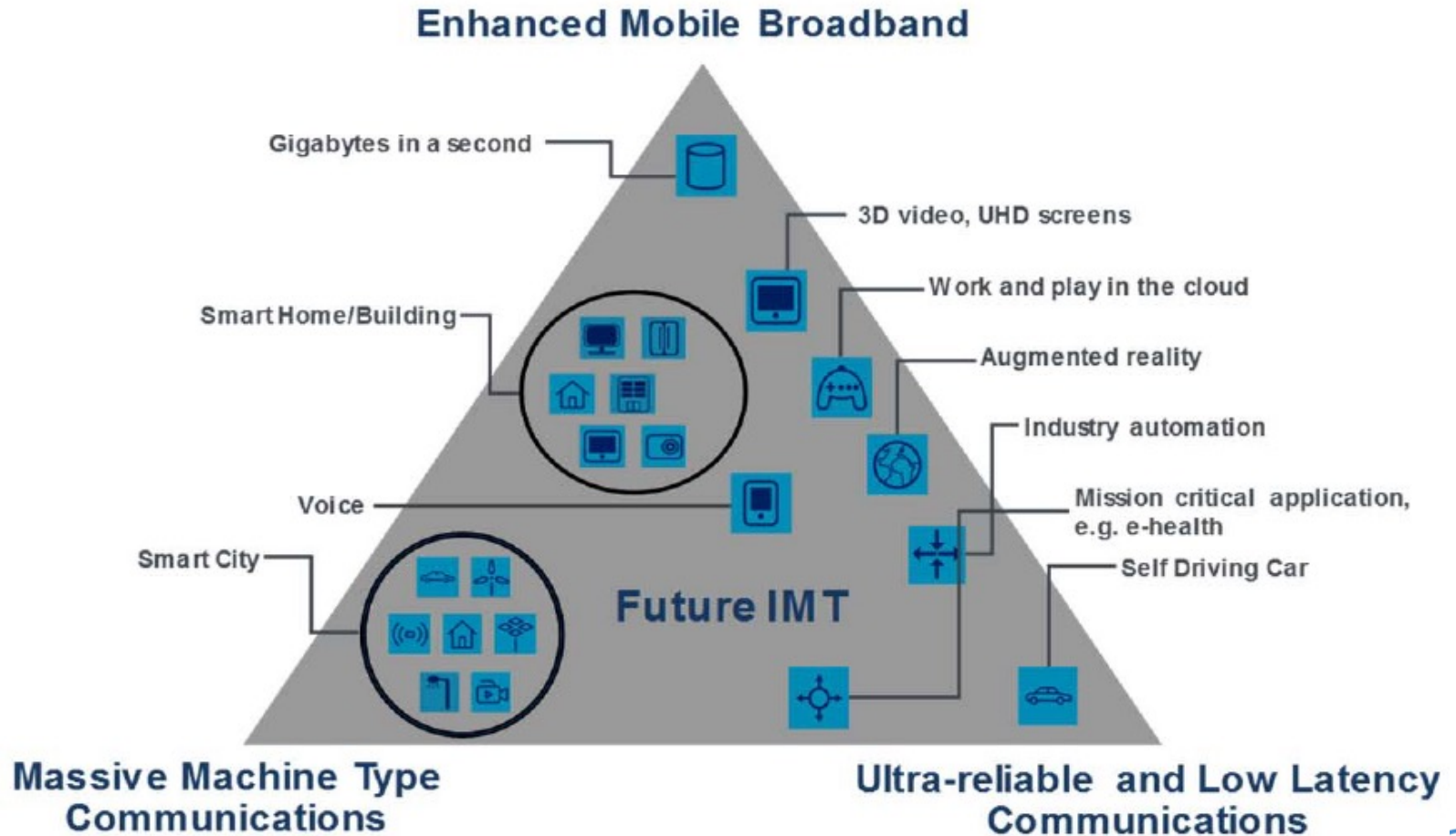
- Fixed access networks to interwork with radio access networks
- Goals for IMT-2020: A converged access-agnostic core - identity, mobility, security, etc., are decoupled from the access technology
- Network architecture to support fixed / mobile convergence, with seamless user experience



*Architecture discussion at a Focus Group meeting, Palo Alto, September 2016*

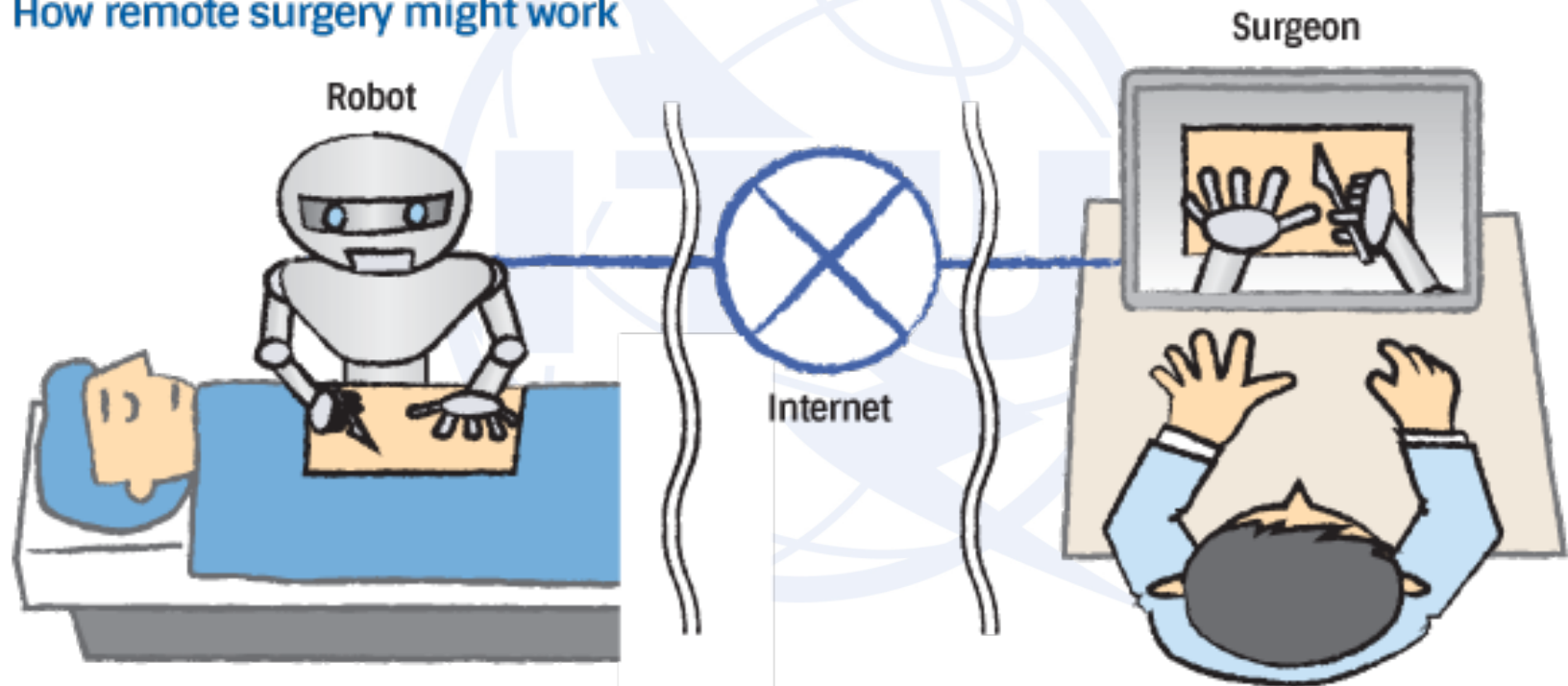
Photo by Marc Mosko, [PARC](#)

# IMT-2020 Usage Scenarios



# Remote Surgery

How remote surgery might work



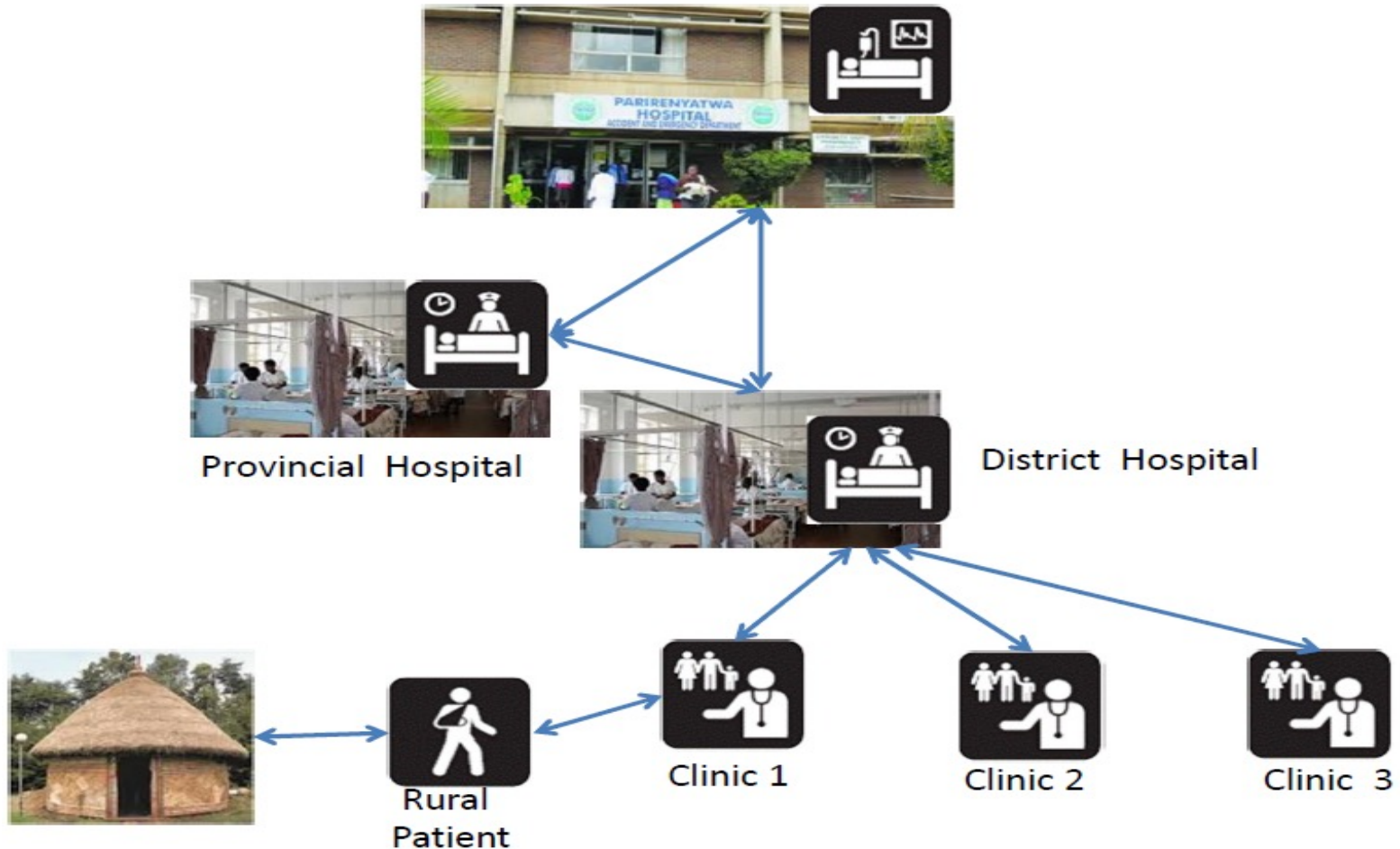
# Telemedicine





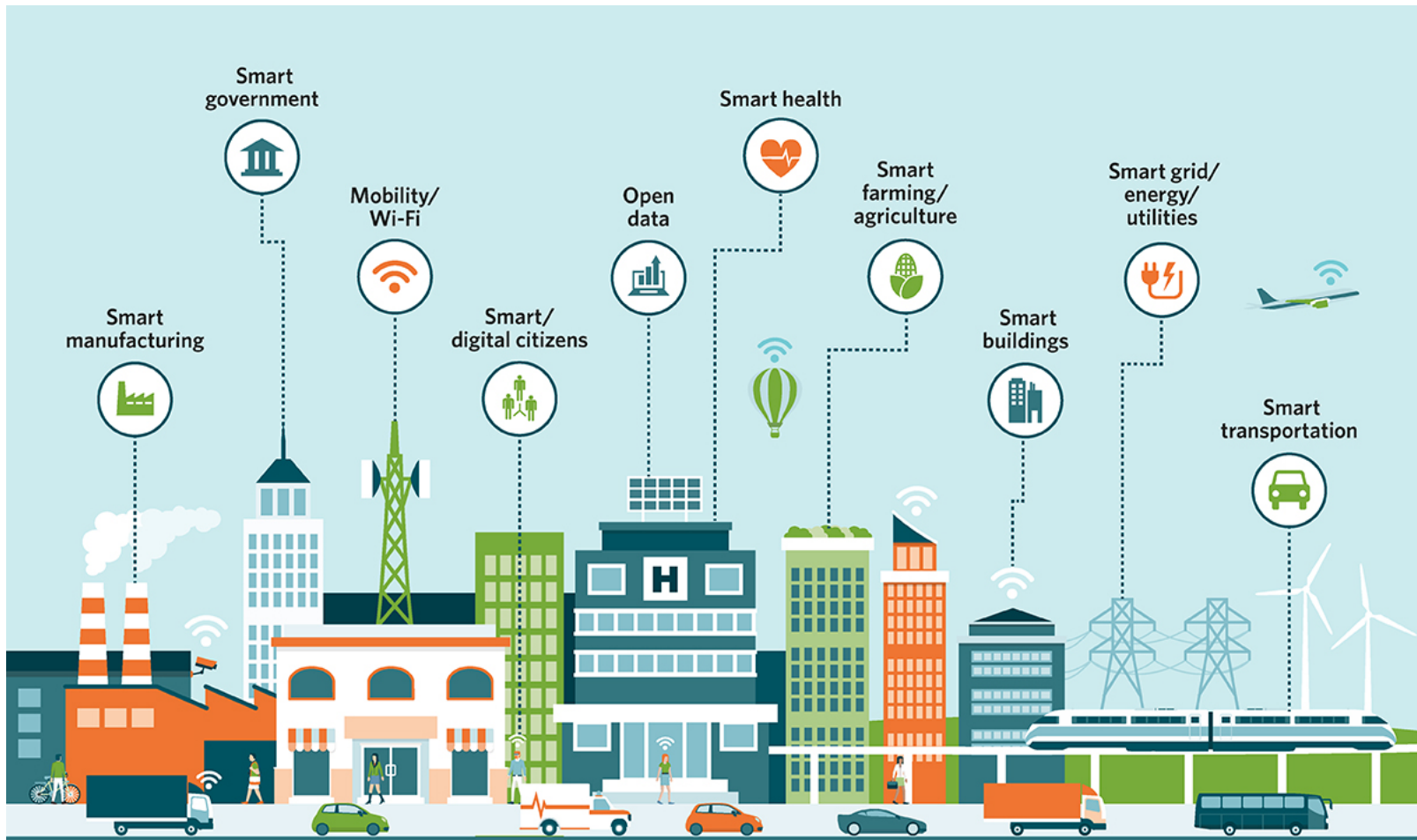


# Telemedicine Model



# Augmented & Virtual Reality in Education & Training





# SMART CITY COMPONENTS

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# What can 5G do for developing countries

- Directly increasing GDP
- Greater economic growth or % gain in GDP
- Reducing transaction costs
- Better, faster, more informed decision-making
- Boosting labour productivity
- Resulting in a net gain in jobs

# References

- Recommendation ITU-R M.2083-0: IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond
- IMT Vision towards 2020 and Beyond IMT-2020 (5G) Promotion Group February 2014
- <https://www.universityofcalifornia.edu/news/telemedicine-saves-patients-time-money>
- <http://financegreenwatch.org/?p=13962>

