LUXEMBOURG I 5G STRATEGY

# 5G PARADIGM SHIFT - LIF TECHNOLOGY

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## PRESENTATION FLOW

Points of Discussion

5G Specs 5G use case families 5G challenges (spectrum)(satellite) LIFI to support 5G 5G new business model (opex not capex) Conclusion

Cellular Generation	Paradigm shifts	Service Pull	Impact
1G - 2G	Analog to Digital	Mobile Telephony	Revolution
2G - 3G	Small cell concept	Mobile Internet	Evolution
3G - 4G	Small cell concept	Mobile Internet	Evolution
4G - 5G	RF to Light	IOT-AR-VR-M2M- V2V etc	Revolution



5G SPECS

**Network Slicing** 



50 Billion IOT connected devices by 2020

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#### 5G USE CASE FAMILIES

#### Single unified physical network - faster but more agile



#### 5G will have to be easier to manage and more agile catering for a range of use case and requirements

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#### 5G CHALLENGES

Spectrum - Environmental impact - Face long term challenges



#### 5G will need to answer new global problems such as energy, EMF, Health, interference

### LIFI TO SUPPORT 5G

#### Shift RF to Light

#### LiFi Networking



Market disruption potential LIFI can unlock industry 4.0 - IOT - Light as a Service

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#### • Low latency

- High speed data transmission
- RF free no interference
- Light+Data in a single point
- Energy saving
- Optical attocell
- Any existing LED
- Extra wireless capacity
- Bandwith Off loading
- Cost effective
- IEEE standard 802.15.7 / 802.11bb

#### 5G NEW BUSINESS MODEL

Service differentiation shift



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### CONCLUSION

Multi layer - Multi services



A single layer can not answer all the new challenges LIFI can support 5G by solving some of the issues



THANK YOU

# THE ADVANCE OF TECHNOLOGY IS BASED ON MAKING IT FIT IN SO THAT YOU DON'T REALLY EVEN NOTICE IT, SO IT'S PART OF EVERYDAY LIFE.

**Bill Gates** 

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