

A World Leading SFI Research Centre



CONNECT

Centre for Future Networks

Next Generation Networks

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Trinity College Dublin

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European Union
European Regional
Development Fund



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CONNECT



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CONNECT Vision

We envision a future of sustainably deployed, dependable networks that foster innovation in services, empower citizens, and improve quality of life

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3

Multinationals



New partners



SMEs



Local Government & Semi-State



5

0G

1G

2G

3G

4G



6

0G

1G

2G

3G

4G

of apps 1

1

2

a few

countless

Analog voice

Analog voice

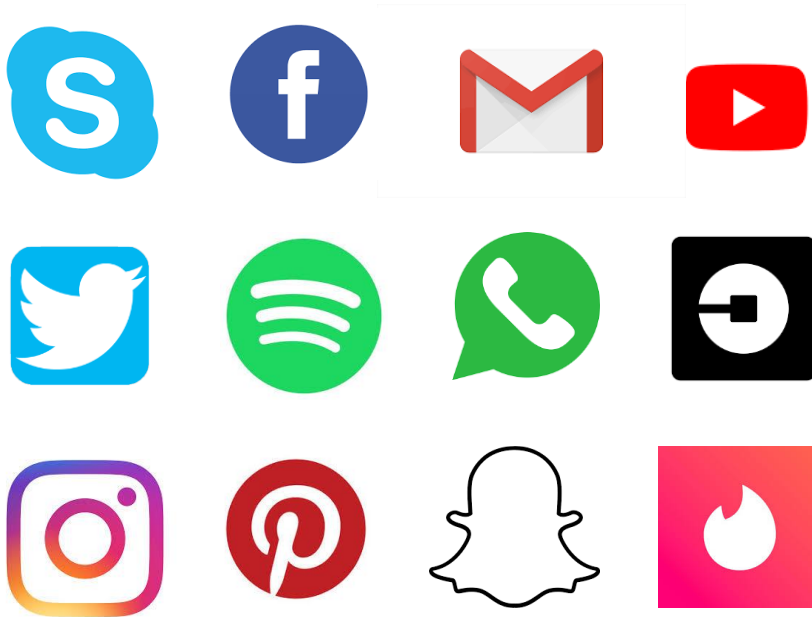
Digital voice

Mobile data

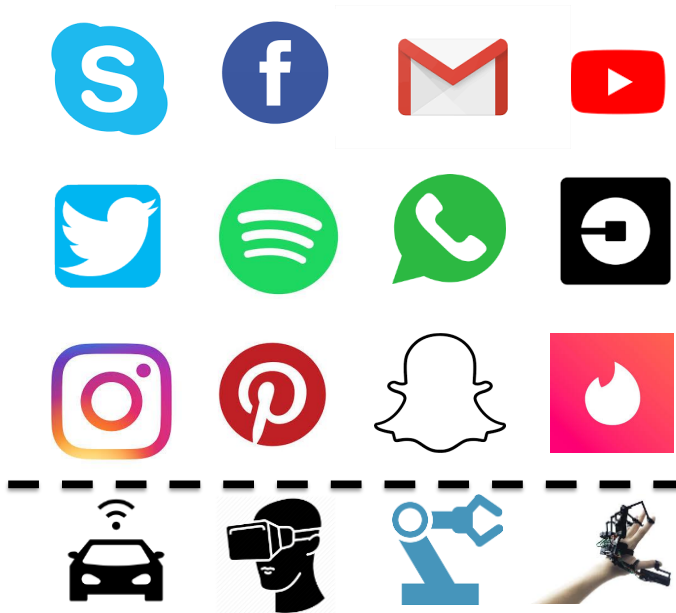
Broadband data



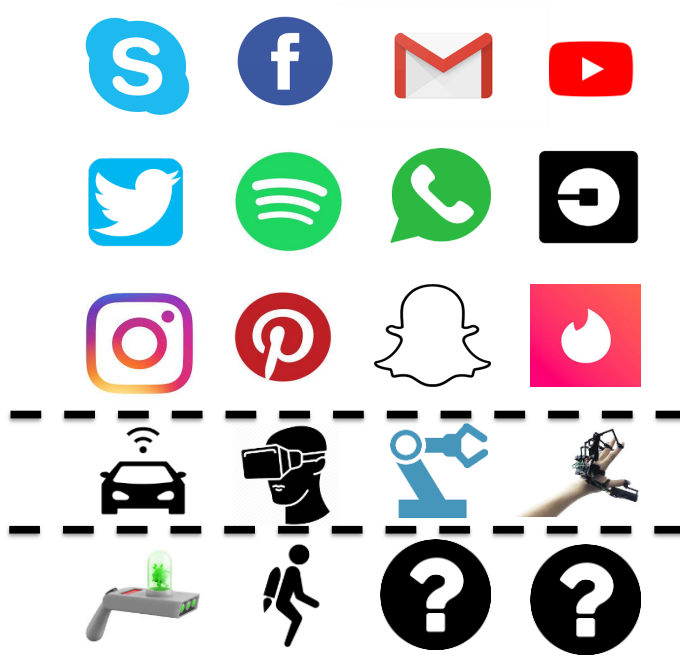
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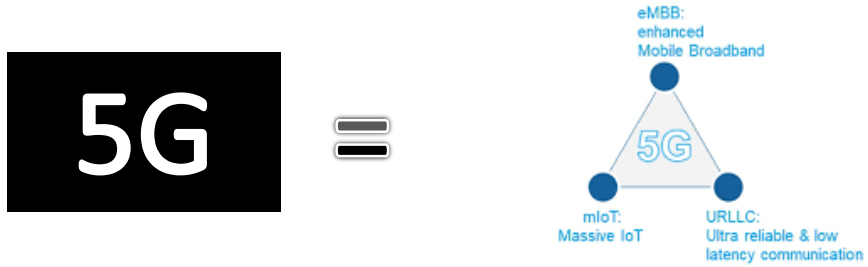
8



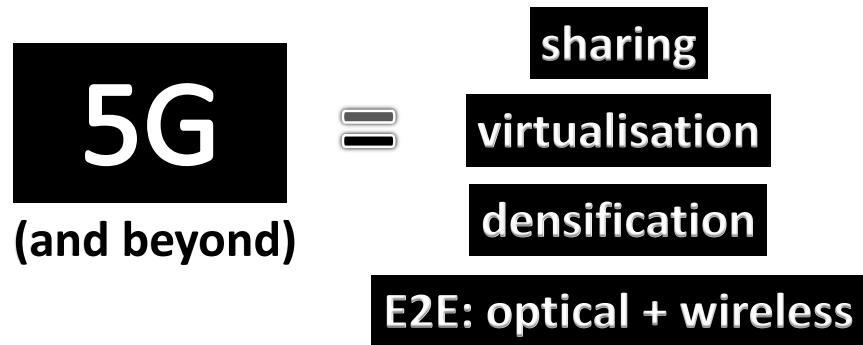
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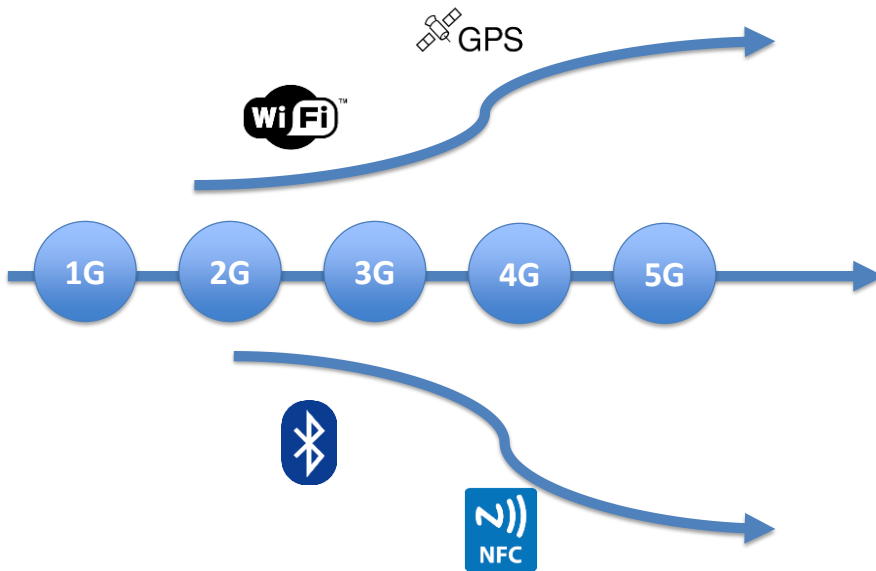
Innovation

Inventing ways to improve communications and networked services







Disruption

Anticipating solutions for an evolving landscape that renders the current ways obsolete

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 <p>DEPENDABLE NETWORKS</p> <ul style="list-style-type: none"> ✓ Provisioning ✓ Distribution ✓ Analytics 	 <p>SUSTAINABLE IOT</p> <ul style="list-style-type: none"> ✓ Energy ✓ Platforms ✓ Security 	 <p>LINK PERFORMANCE</p> <ul style="list-style-type: none"> ✓ Multi Gbps ✓ Photonics ✓ Signal Processing ✓ Molecular 	 <p>CUSTOMISED NETWORKS</p> <ul style="list-style-type: none"> ✓ End to end ✓ Monitoring ✓ Trust 	 <p>DATA-DRIVEN OPT & MGMT</p> <ul style="list-style-type: none"> ✓ Proactive ✓ Resilient ✓ Distributed 	 <p>THE NEW OPERATORS</p> <ul style="list-style-type: none"> ✓ Framework ✓ Regulation ✓ Financial Model
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**Pervasive
Nation**

125
Company Relationships

30
Active Projects

The infographic features a dark blue background with a grid of light blue lines. The number '125' is in white, and '30' is in orange. Green squares are placed at the intersections of the grid lines.

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PERVASIVE NATION NN

- 1. UNIQUE ACADEMIC-OPERATED COUNTRYWIDE IOT TESTBED**
- 2. INDUSTRY CAN USE IT TO TEST SOLUTIONS AT SCALE**
- 3. BASED ON OPEN STANDARDS**
- 4. HAS LED TO NEW INVENTIONS AND A START-UP**
- 5. SERVING AS A BLUEPRINT FOR OTHER NETWORK FACILITIES IN 5G AND BEYOND**

The infographic has a red background with a grid of small white dots. The text is in white and bold.

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Issues for city deployment



Examples of under-utilised street furniture that could support mobile network infrastructure.

Street furniture: power, fibre, metering



An example of active equipment duplication and the resulting impact on visual pollution. Credit: Shutterstock/kriang phromphim

Sharing models: shared infrastructure, concession, neutral hosting

Source: "5G: an emerging framework for Irish cities and towns", white paper by DCC and Smart Docklands

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- ① We design networks that meet the requirements of the next generation of services
- ② We design networks that enable innovation in ways that we cannot currently envision
- ③ We do this from a combination of maths, experimentation, simulation, and taking into account the business and regulatory models that underpin the evolution of those networks

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