



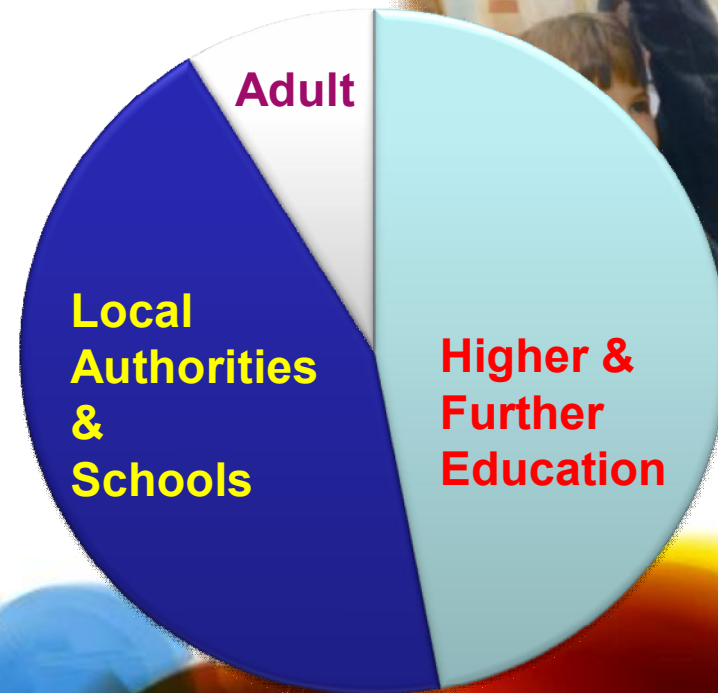
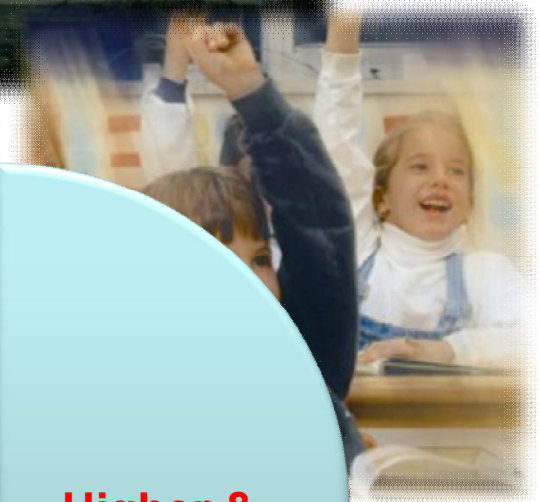
# Connecting research & education in the UK

Josh Howlett  
Head, International Collaboration

22 May 2013  
CEENGINE, Kiev



- Available to 18M users
  - Higher & Further Education
  - Academic research
  - Primary & Secondary schools
  - Adult & community learning
- Over ¼ of the UK population
- Janet is a not-for-profit company, owned by the UK's research & education community

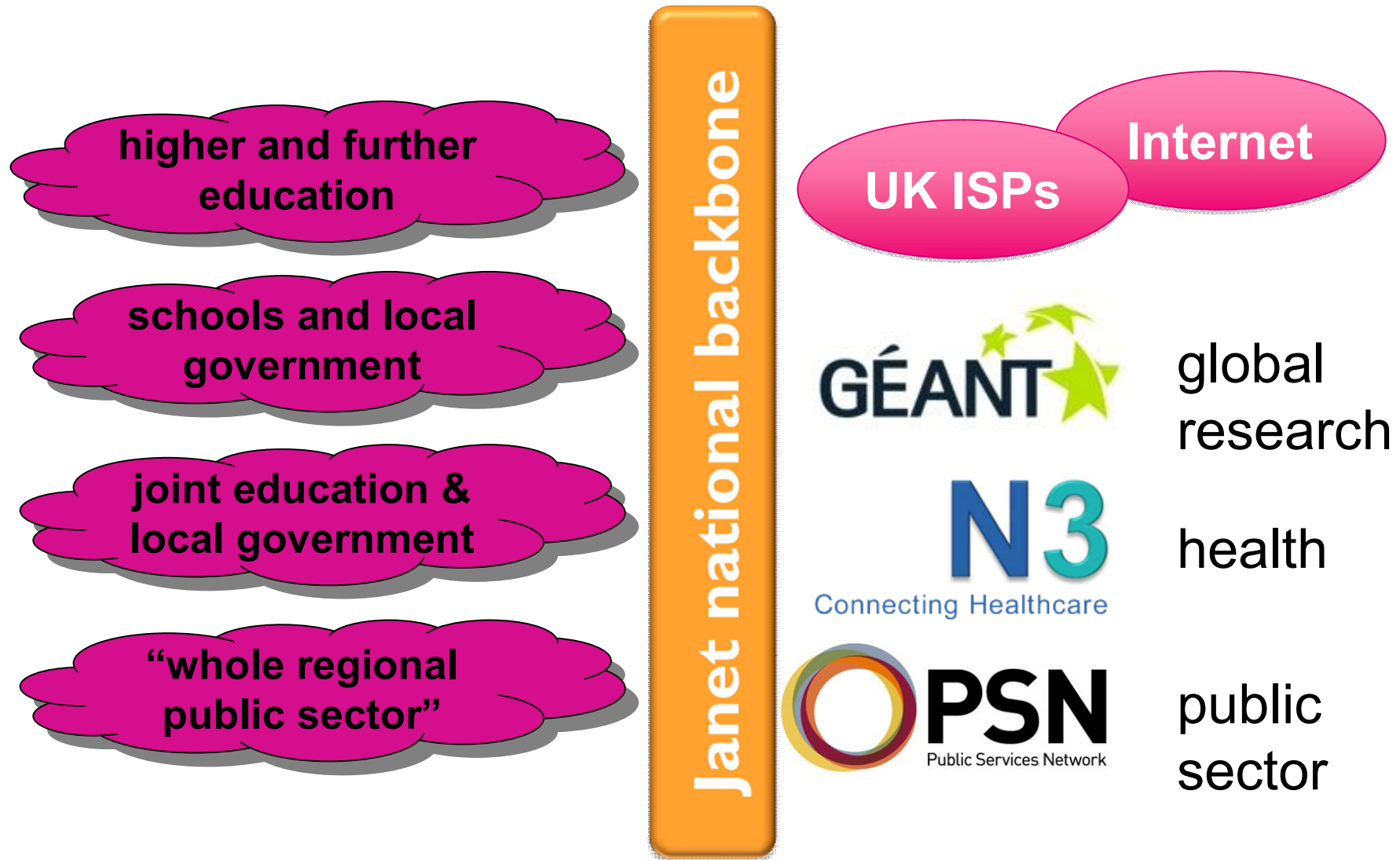


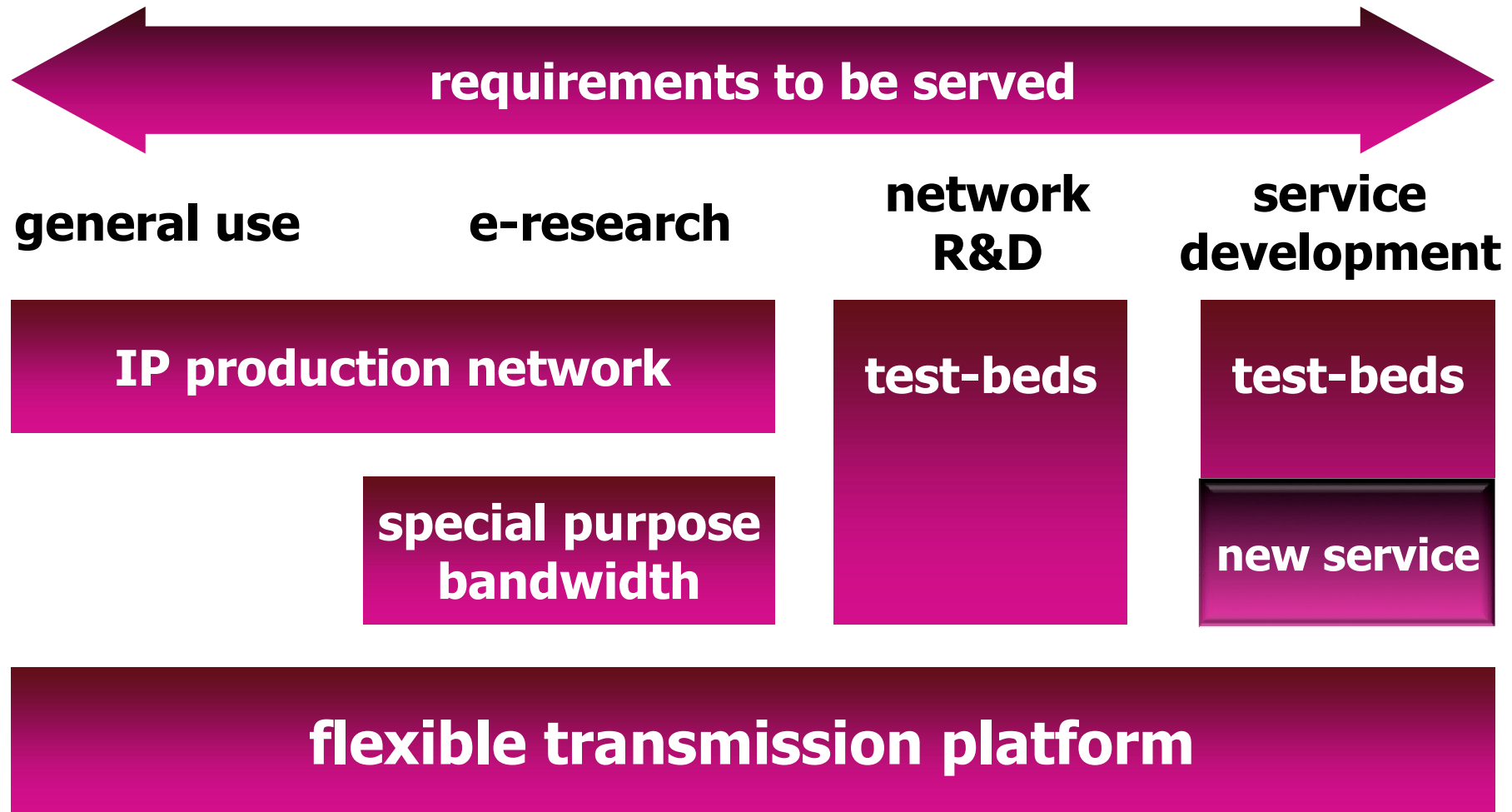


- ***To deliver a highly reliable and secure network***
  - Careful design choices
  - Carrier class network equipment & infrastructure
  - Strict SLA's
- ***To provide a network that is flexible in meeting future demand***
  - Design enable capacity scaling at controllable cost
- ***To provide a network that is more agile in dealing with change***
  - Management by Janet NOC
  - Close working relationship with industry partners

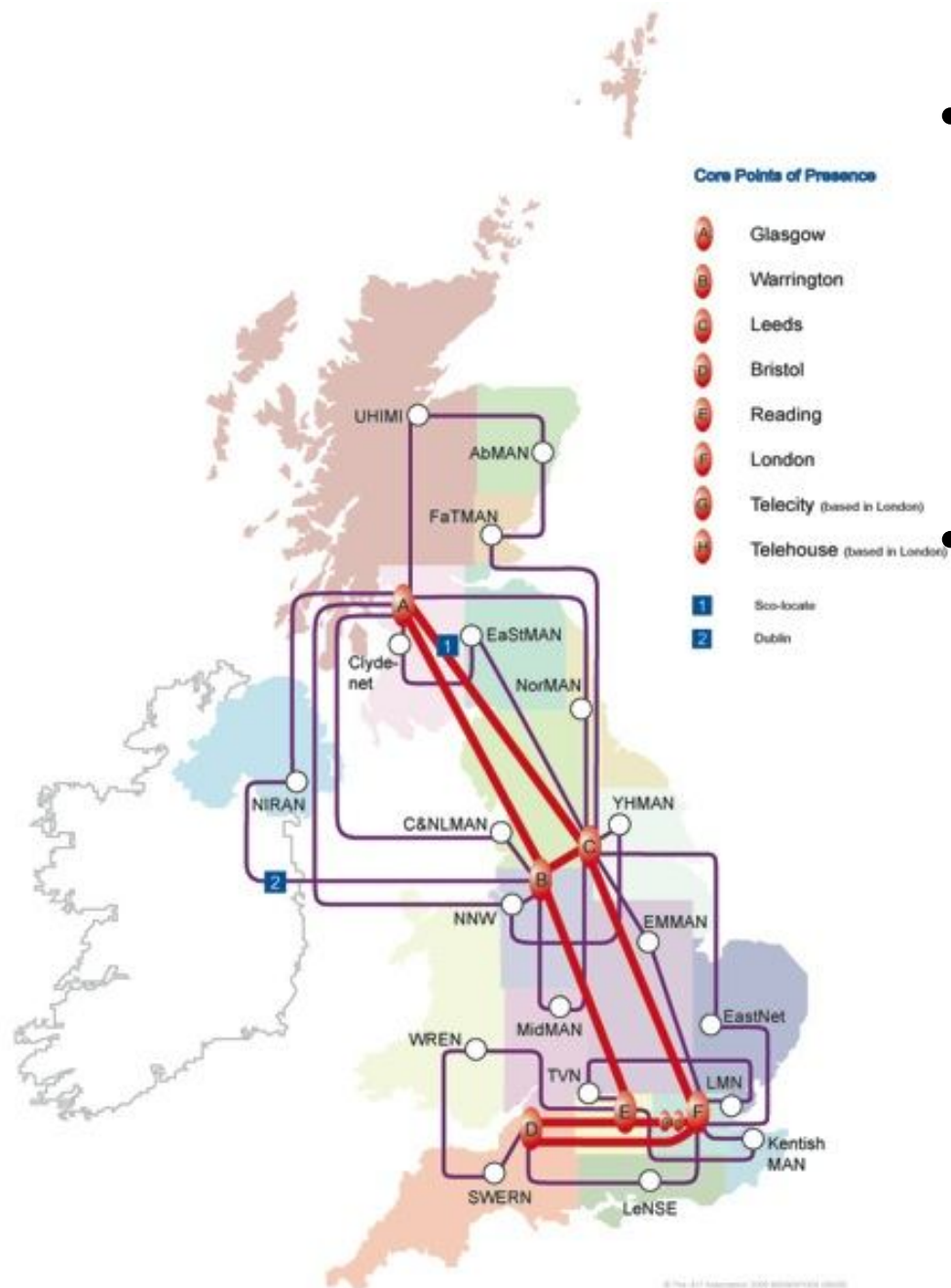


# Janet's national and regional architecture





# Current network – SuperJanet5 – 2006 to 2013



- Dedicated transmission infrastructure provided to Janet by Verizon Business
- Janet operates the IP and Ethernet services



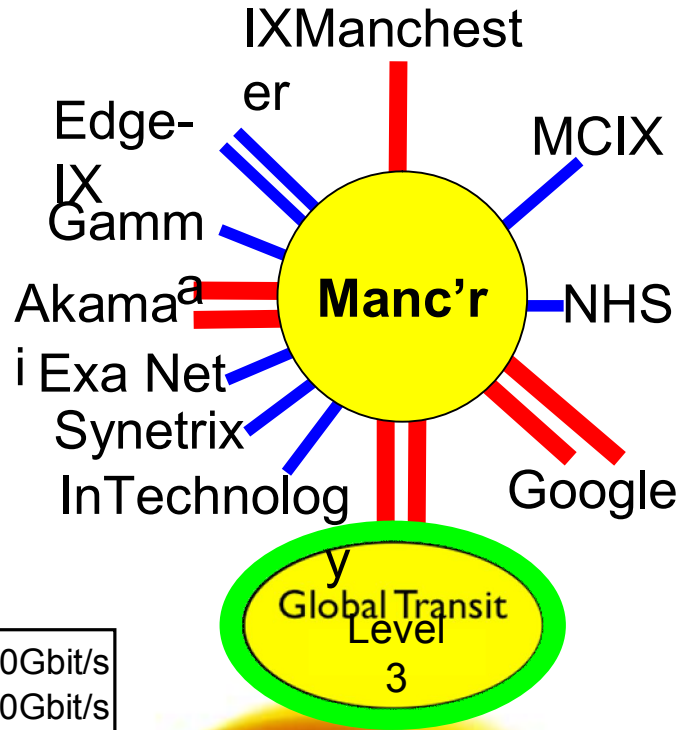
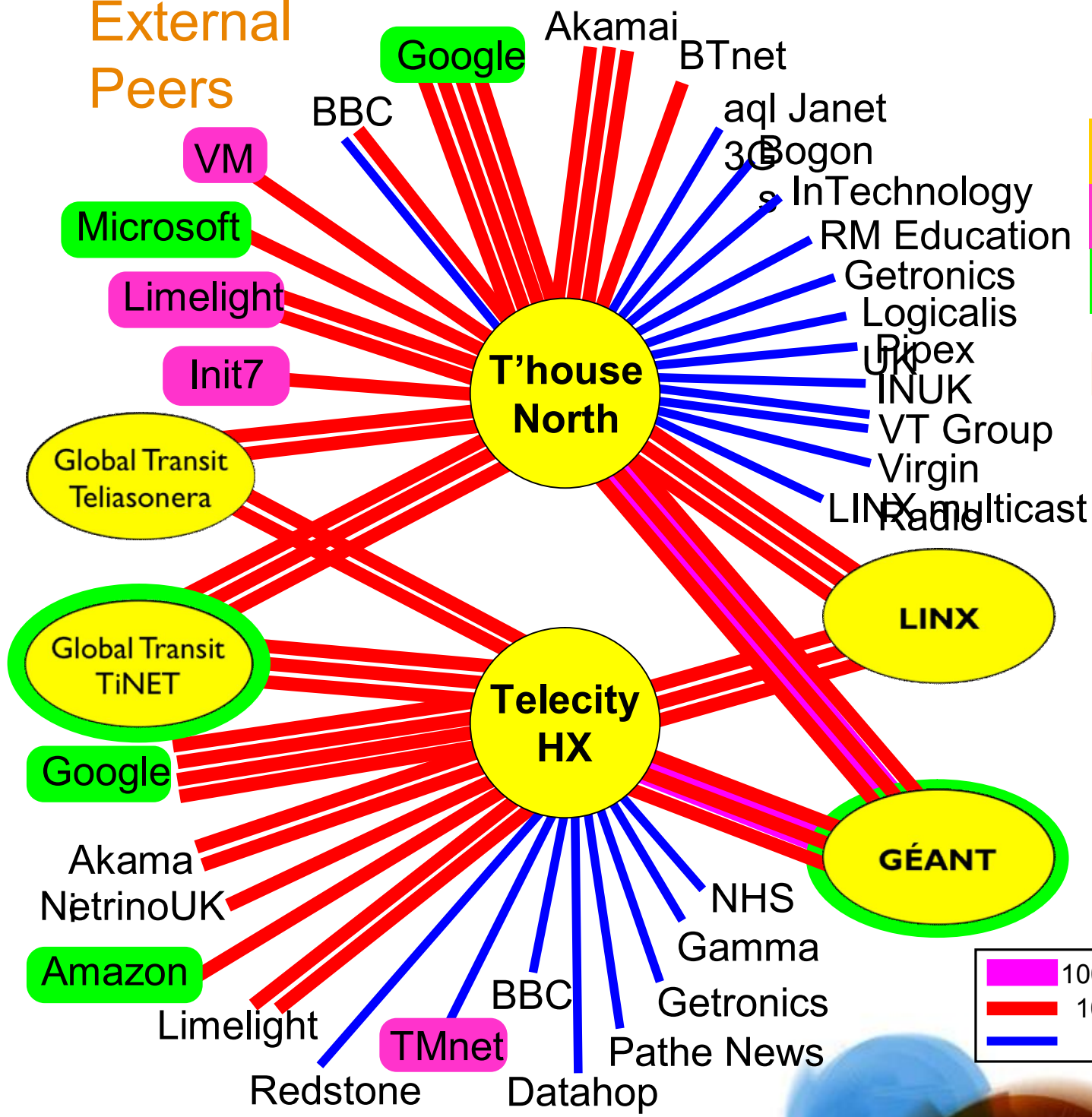
External Peers

**Last year: 448G**

**This year so far:**

**Coming soon: 709G**

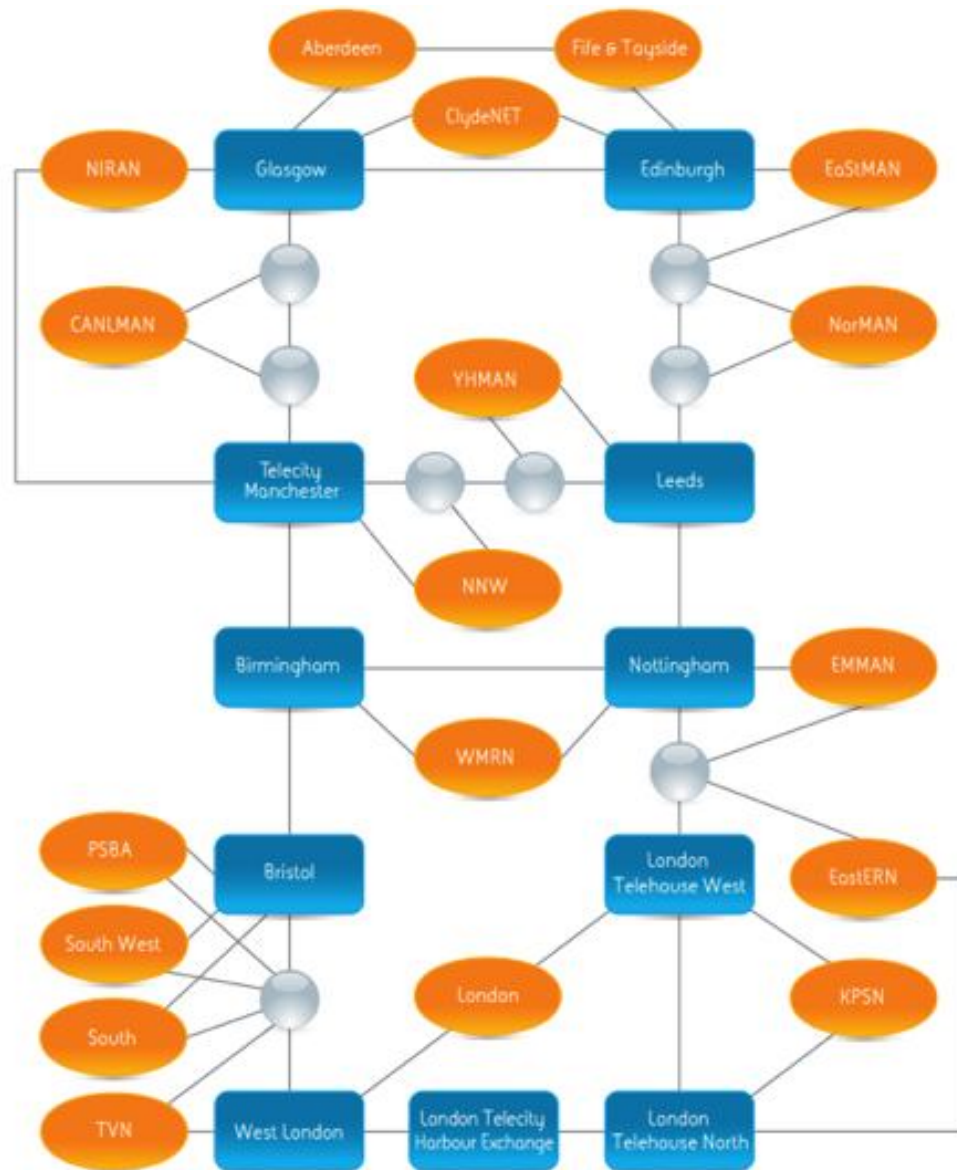
**~300 external peers**



100Gbit/s (pink line)

10Gbit/s (red line)

1Gbit/s (blue line)



- Replacement of the Janet UK-wide backbone
- Design and delivery rooted in customer requirements
  - Highly scalable
  - Highly reliable
  - Flexible
- Key specifications:
  - 6500km fibre
  - Ciena 6500 transmission platform, scalable to 8.8Tb
  - Juniper T4000 & MX960
  - Managed by the Janet NOC
- In operation mid-2013

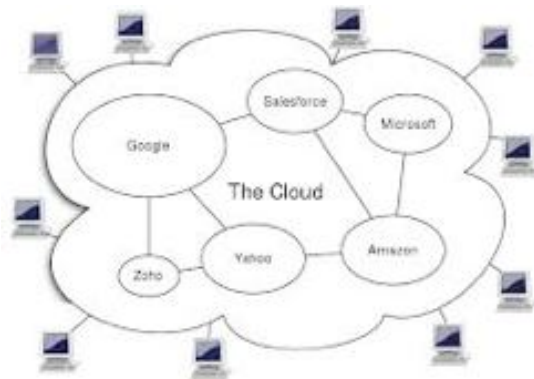


- Janet delivers 40+ services
- Connecting to Janet
- Technical advice
- Security
- Communicating
- Infrastructure
- Research
- Training
- Purchase frameworks
- Cloud



# There's going to be more!

janet



- **Video services**
  - Any video client
  - Multiple participants
  - Easy scheduling
  - Customisable
- **Telephony**
  - SIP based telephony delivered over Janet
- **Access and Identity Management**
  - Integrated product set, including eduroam and other AIM services
  - Moonshot: the future of AIM
    - Janet pilot with 44 organisations
    - GÉANT pilot
- **Mobile services**
  - Janet 3G
  - 4G trials with EE



# e-Infrastructure for research: directions & priorities



- maximising research investment
- strengthening cross-border links
- open market for researchers
- gender equality
- accessing scientific knowledge
- joint programming

## use of e-infrastructure – UK priorities for support:

- engineering & manufacturing
- life sciences
- energy
- construction (smart cities)
- information economy
- financial & professional services

# Thank you

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