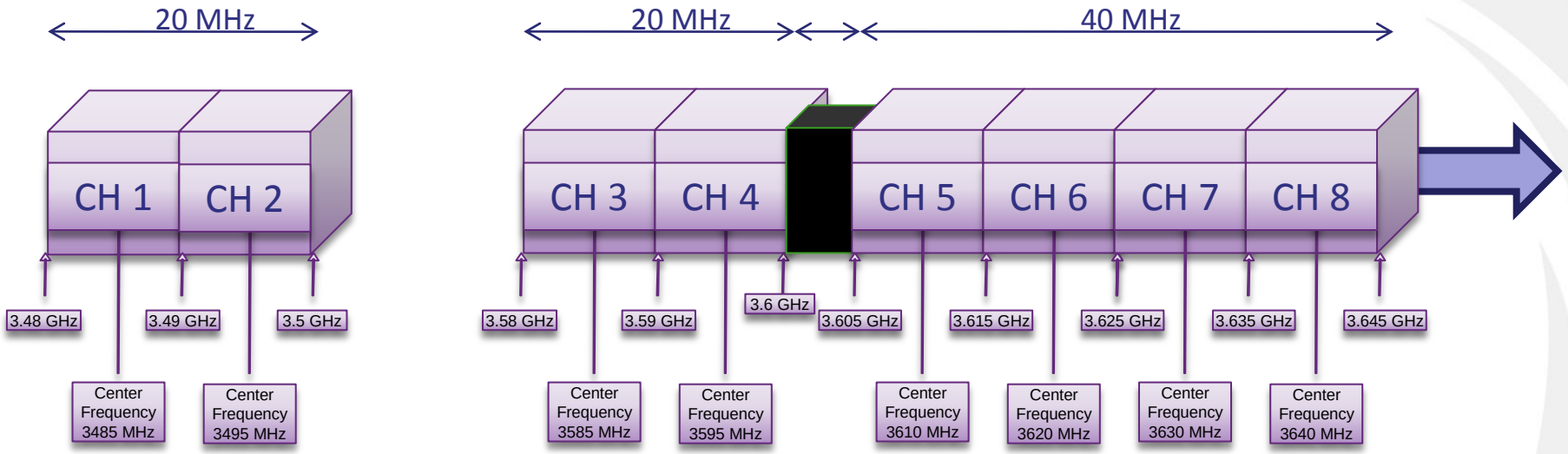
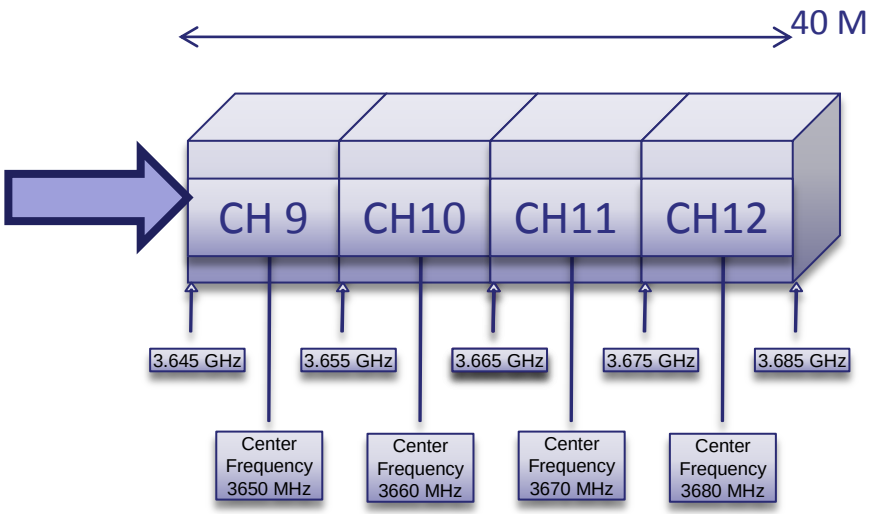
LTE Trials and Commercial Deployment

UKNOF - YORK

Commercial LTE? HOW?

Spectrum for 3.5/3.6GHz LTE





Total:

120MHz of LTE Spectrum. 6x20MHz channels.

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TD-LTE @ 3.5-3.6Ghz

TDD-LTE: LTE that transmits and receives on the same channel rather than FDD-LTE where you transmit and receive on separate channels.

We think TDD-LTE is better because of the typically asymmetric nature of client-server traffic. With TDD-LTE we get more downlink bandwidth which is where the demand is. Uplink works well too though.

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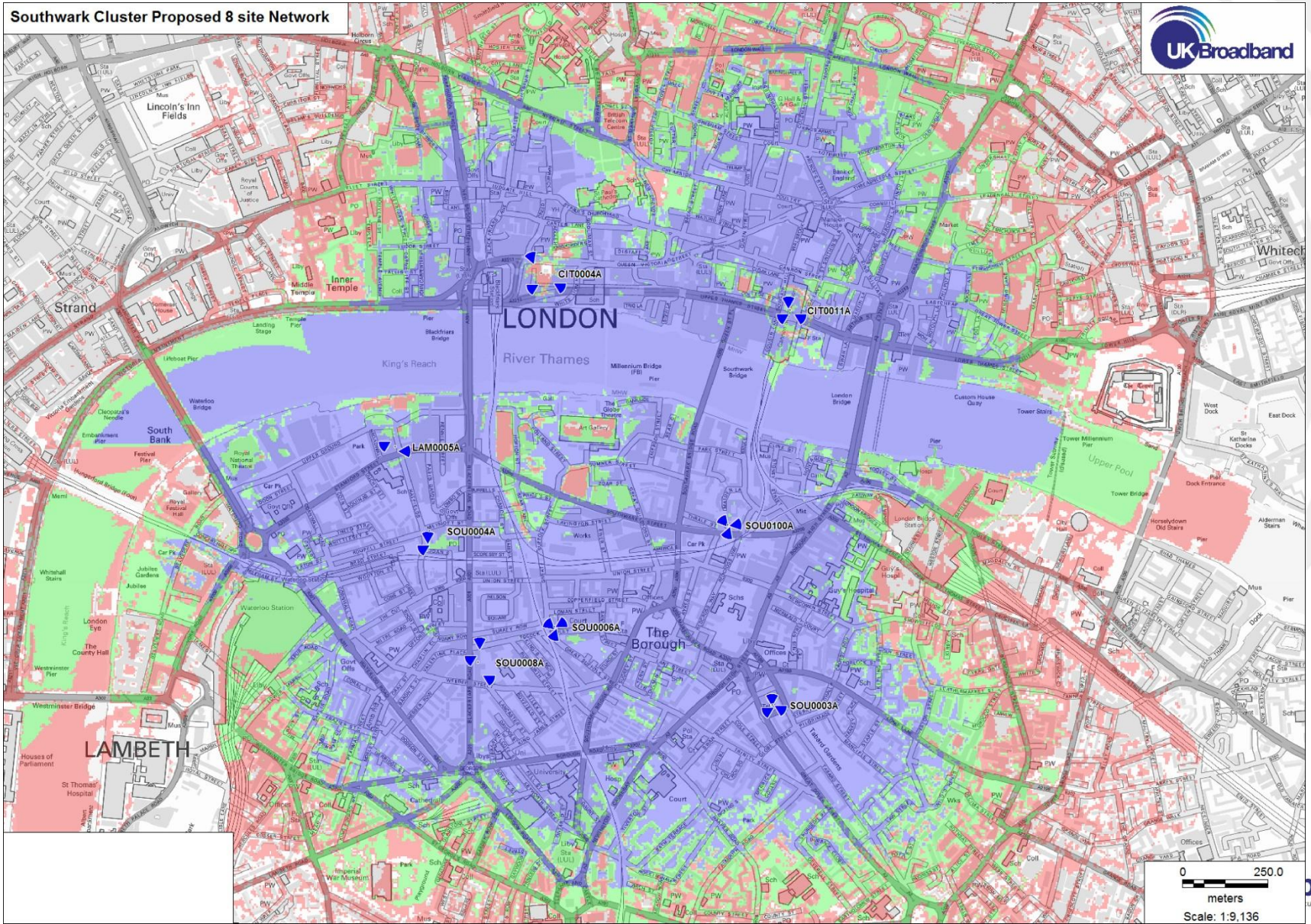
Build a network (small one to start with) 1.. Build LTE sites

2 LTE base station sites in Reading. 8 LTE base station sites in Southwark.



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Build a network (small one to start with) 1.. Build LTE core

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Build a network (small one to start with) 2.. Build other bits

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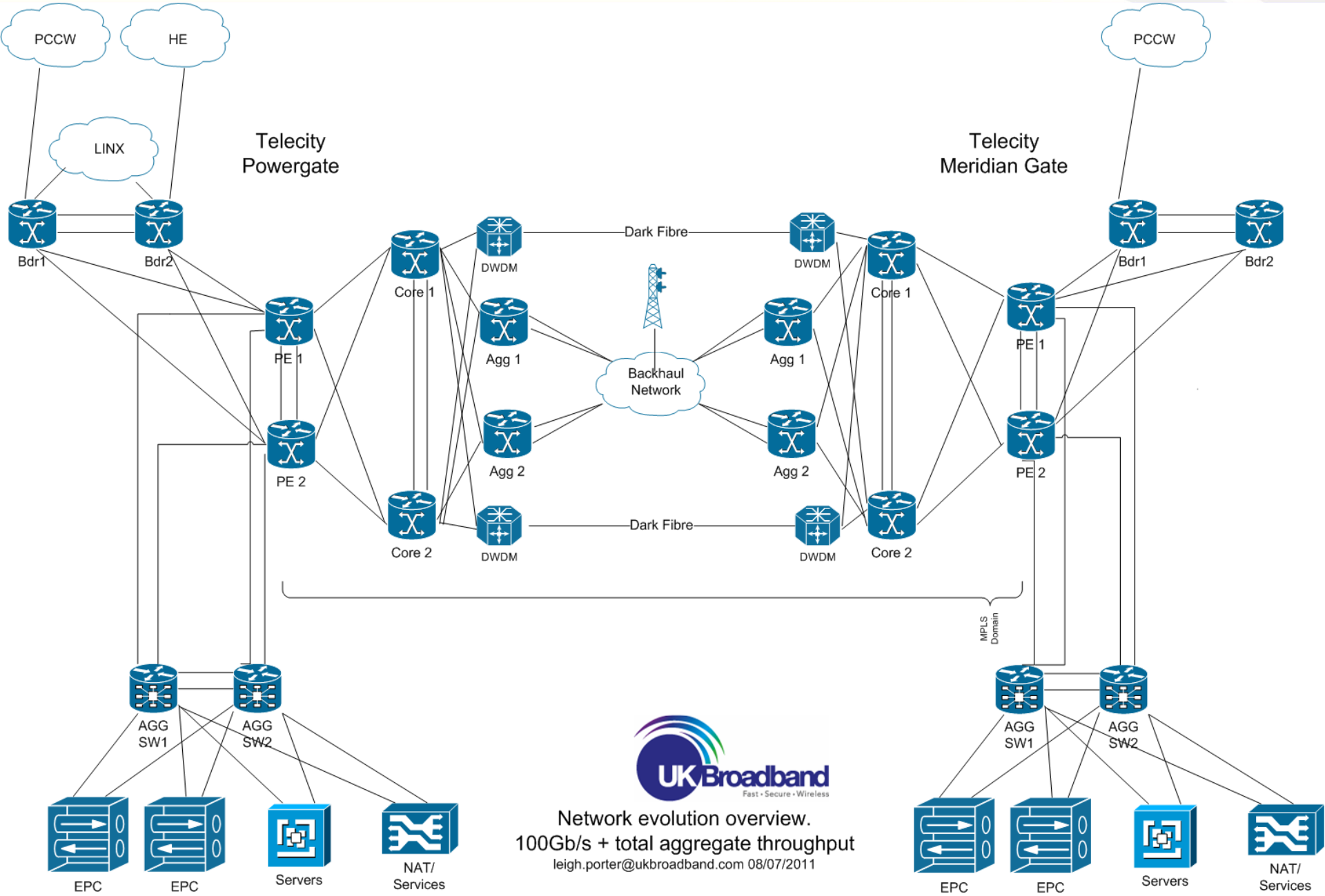
Build a network (small one to start with) 3.. Connect it all together



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Network evolution overview.
100Gb/s + total aggregate throughput

leigh.porter@ukbroadband.com 08/07/2011

See if it works (The tin said it'll do 60Mb/s)

Our test CPE is limited to about 62Mb/s because of chipset limitations.

But it should do about 120Mb/s with the updated chipset (on its way)

Wired-in tests in the LAB:

FTP Download test: 60Mb/s

FTP Upload test: 5Mb/s

One way end to end delay downlink: 8.2ms

One way end to end delay uplink: 9.4ms

Real tests @ 1Km from base station:

FTP Download test: 60Mb/s

FTP Upload test: 5Mb/s

One way end to end delay downlink: 9.2ms

One way end to end delay uplink: 10.4ms

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12 LTE base station sites in Swindon.
Construction has already started.

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