



SCENARIO

A joint venture (JV) formed in 2007 between EE and H3G to achieve CAPEX and OPEX reduction through the economies of scale of passive infrastructure sharing, resulting in the creation of a ground breaking tower company.

GOALS AND EXPECTATIONS

Transformation of both Network Operations (OPS) and Operational Support Systems (OSS) to further Shareholder vision and strategy for network planning, design, build and operation while optimising operational efficiencies and decoupling ongoing operational expenditure from network growth, enabling both MBNL and Shareholder-Unilateral processes to coexist effectively. Become a World-Class TowerCo.

2G



MNO rivals T-Mobile & H3G continue rollout of 2G across the UK to compete with Vodafone and O2

2.5G



MBNL formed to deliver and operate 3G network



MBNL ~~GODIVA~~ network integration milestone of 12,000 sites



Following merger with T-Mobile, Orange join MBNL as Everything Everywhere (now known as EE)

3G

4G



UK first 4G network launched under EE; EE & Three sign new network sharing agreement



MBNL reaches 18k RAN sites and carries 75% UK mobile data traffic



EE joins the BT group, Jan 2016

5G



UK 5G spectrum auction raises GBP £1,355,744,000

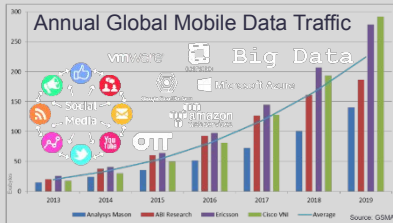


67% (£453,888,000) of UK 5G spectrum auction investment from EE and Three



UK Government launches 5G Testbeds and Trials Programme (5GTT)

JV inherited monolithic, heavily customised OSS and overly complex shareholder-unilateral processes



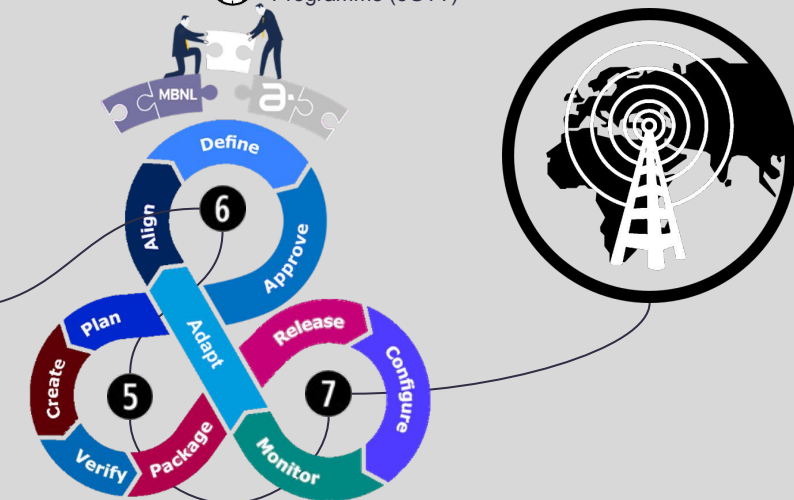
2G networks expected to outlast 3G as MNOs jump to 4G

vRAN/VEPC/VIMS usage soars due to increase of NFVI

Connected "Things" drive need for capacity & coverage

IoT M2M

5G Readiness



EMBRACE COTS

OSS: configuration vs. customisation (SP5)
RAN: multi-vendor / cRAN & RRH / virtualised
MBH: multi-party (OLO)
Decommissioning: remove cost & dependencies from monolithic OSS and legacy infrastructure
KPI: increased service levels + availability - failure

LEVERAGE SOFTWARE DEFINED

Virtualisation: Software Driven Data Centres
Orchestration: End-to-End process management with the inclusion of industry standard APIs (SP7)
Automation: driving scaling of rollouts & enhancements
Multi-tenancy: single instance serving multiple tenants
Utilisation: high asset usage - CAPEX - OPEX

CONSOLIDATE & OPTIMISE

Estate: combine legacy estates
RAN: fine-tune through drive testing, analytics, crowdsourcing data and trend forecasting
MBH: capacity & latency to be 5G ready (VoLTE & ViLTE)
OPS: business process isolation, zero technical debt
Agility: through outsourced flexibility & scalability (SP6)

RULES OF ENGAGEMENT

UK Regulatory: 1996 / 2003 / 2006 / 2016 / 2017 / 2018
Security: SC/DV paramount, lawful interception, IDPS (SIEM)
Regulatory: Ofcom / European Commission
Data: Quality & Integrity through segregation
Spectrum: Harmonisation

WORLD-CLASS

- SD-WAN for MBH
- Backed by World-Class ISV, **Amdocs**, with industry leading OSS and services, conforming to existing and leading industry standards: eTOM, ONAP, LSO

CERTAINTY

- Work with **Amdocs** to introduce new global Tower-as-a-Service standards through TMF & MEF for MNOs and vendors to adopt
- Enable new seamless shareholder enablement
- Forecasted capacity and coverage

EXCELLENCE

- pre-emptively find new UK/EU tower estates (i.e. Vodafone rumoured tower sale across the EU)
- Small Cell for 5G (femto, pico, micro, macro)
- Profit-Centre NOT Cost-Centre + ROI
- Dependable Mean Time To Repair (MTTR)

FLEXIBILITY

- On-Demand rollout and RF planning
- Enter new territories: EMEA, APAC, CALA, NAM – post Brexit opportunities
- Offer to global market: Tower-as-a-Service

