

“Our MAN in Malaysia”

A shared services approach
to Internet connectivity at
EduCity, Nusajaya, Malaysia

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Agenda

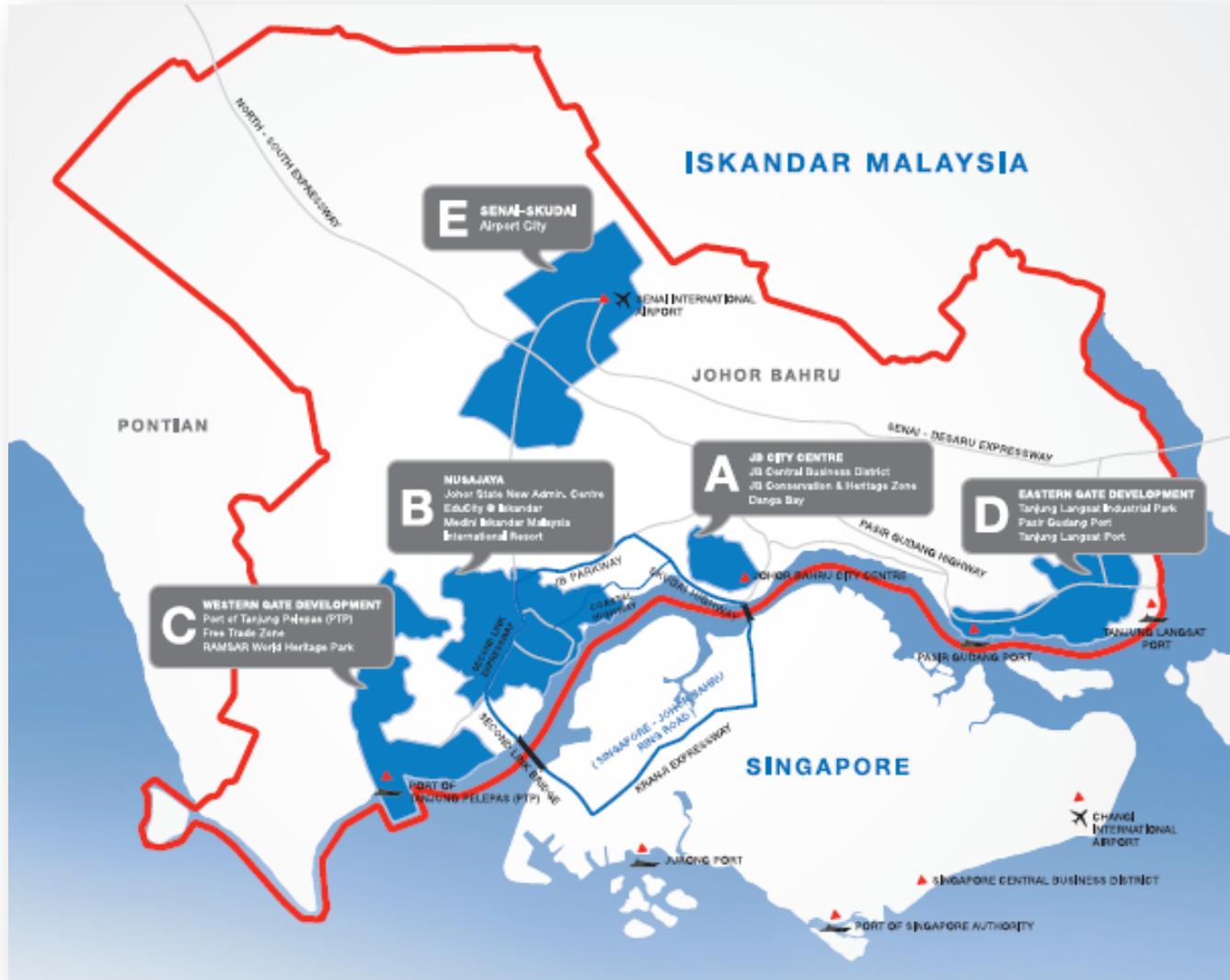
- Background
- Drivers for collaboration
- Solution: EduCity MAN
- Challenges
- Next Steps



Background

- Geography/Political Context
 - EduCity is part of the wider Iskandar Malaysia regional development programme
 - Iskandar Malaysia is of strategic importance to federal & regional governments
 - Iskandar Malaysia zoned: Education; Finance; Leisure; Housing
 - A new city, Nusajaya
 - Very close to Second Crossing to Singapore







EduCity

- HE leads in particular subject areas
- Newcastle University invited to deliver medical education courses
 - MBBS 5-year medical degree
- Shared access to common facilities
 - Accommodation
 - Sports



NUMed Malaysia

- Timelines
 - Newcastle University Medicine Malaysia
 - Cohort 1 students 2009 in UK
 - NUMed EduCity Campus:
 - Handed over April 2011
 - Opened to staff May 2011
 - First students August 2011
 - First graduation 2014



Other EduCity tenants

- University of Southampton Malaysia Campus: 2012
- University of Reading Malaysia: 2015
- Raffles University Iskandar
- Netherlands Maritime Institute of Technology
- Multimedia University – USC
- Management Development Institute of Singapore
- Marlborough College: 2012



NUMed Internet pre-MAN

- NUMed Malaysia EduCity anchor tenant
 - Little infrastructure in place
- Internet connectivity crucial
 - Little competition for tail circuits
 - Very expensive (cf. UK)
 - Janet equivalent (MYREN): no Internet transit
 - Tender exercise:
 - Contract (2+1 years) awarded to SingTel for 50Mbps of Internet connectivity.
 - 10Mbps broadband backup from Telekom Malaysia



EduCity MAN

- Obvious partners
 - NUMed, Southampton, Reading and Janet
- Sharing Internet connectivity should deliver benefits to HEIs:
 - Cost; Capacity; Resilience; Management overhead
- Benefits to Janet:
 - Valuable experience that could be applied elsewhere in the future



EduCity MAN 2

- Each partner brings something to the table:
 - NUMed: day-to-day management of the MAN; routing equipment; host primary connection
 - USMC: fibre between NUMed and USMC; host backup connection
 - Reading: fibre to NUMed and USMC;
 - Janet: lead contracting authority; contractual experience; management of supplier; financial pump-priming.

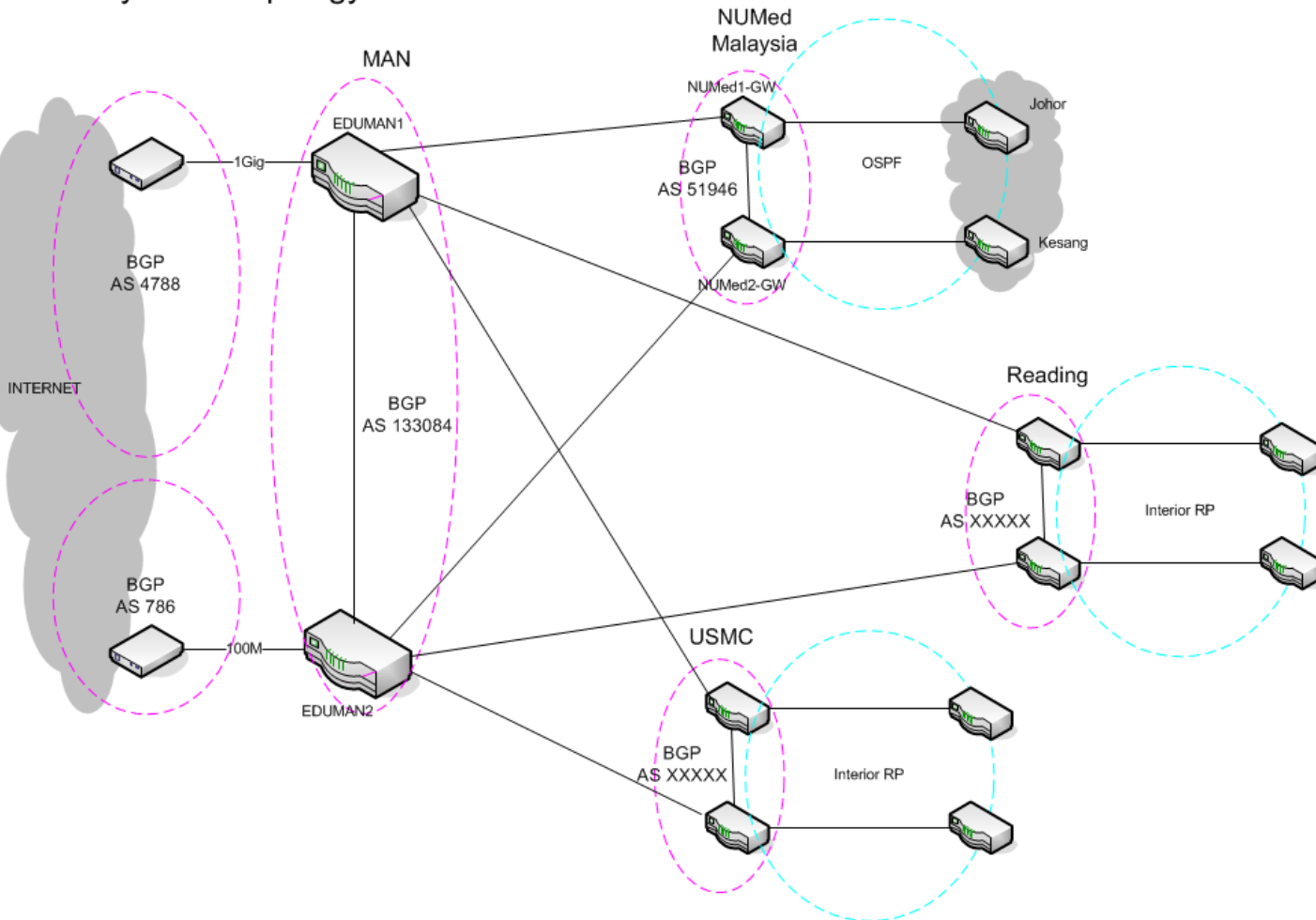


EduCity MAN 3

- What will be delivered:
 - Shared access (Telekom Malaysia supplied):
 - 1Gbps of primary connectivity
 - 100Mbps of broadband backup
 - Two separate MAN/Telco entry points
 - Each HEI has two 1Gbps MAN connections
 - Cost sharing
 - Ability to extend to other institutions
 - Ability to increase bandwidth if required



EduCity MAN Topology



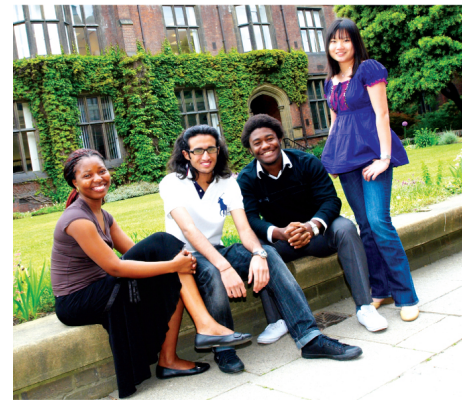
EduCity MAN 4

- BGP Peerings:
 - Primary over 1Gbps circuit:
 - Telekom Malaysia in Seri Medini
 - Secondary over 100Mbps broadband:
 - Tunnel to Janet router in London!
 - Telekom Malaysia would not provide a BGP peering over Broadband
 - Routing not optimal, but...



Challenges

- Contracts:
 - Both between Janet and HEIs and Janet and suppliers
 - Lengthy negotiations!
- Delivery:
 - Circuits
 - Late; is it really what we ordered?
 - Routing equipment
 - Delivery very, very late!



Next Steps

- Connectivity testing
- Migrations
 - NUMed Malaysia (soon); USMC (June)
- Futures
 - Provide service to EduCity Shared Services?
 - Provide service to Reading (2015)
 - Improved MAN fibre resilience
 - Provide service to other institutions?
 - Further cost sharing?





Newcastle
University
Medicine Malaysia

Bell's
Court