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ESTATES AND IT WORKING TOGETHER IN HARMONY

Estates and IT working together in Harmony
JANET Networkshop42
1st – 3rd April 2014
Leeds University

Who am I?



- Simone Barbaresi
- Deputy Director IT Services (infrastructure)
- Bangor University
- Twenty years in system administration
- Changes in the department in 2011
- Last three years: One Data Centre and four building refurbishments

Journey from Disorder to Order

- Building Refurbishment
 - Reichel Summer 2011
 - Data Centre Refurbishment Autumn 2011
 - Rathbone Summer 2012
 - Garth Summer 2013
 - Pontio 2014
- Apologies if expecting a tech
- Questions



Building Refurbishment

- Riechel Halls of Residence
- Built in the 1940s
- Summer 2011
- £3.5 Million
- Refurbishment
- 100 Bedrooms
- Also, conference venue
- IT involvement too late



IT involvement too late



- Horse had bolted ... IT involved in August for September hand over
- That will do ... drawings not marked with Wifi APs, AV, etc
- We can get away with that ... no data test certificates, no labelling, no fibre,
- PC Room with kitchen units
- Analogue CCTV on IP
- No socket for phones
- Faults, faults and more faults
- yo-yo site visits
- Can't be repeated



Observations from Reichel



- Confusion and chaos
- What are the IT Services
- Who is responsible for what
- What are the relationships
- Communication channels
- Know your place

What are the IT Services



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- IT Infrastructure Service
 - What the user sees
- IT Infrastructure
 - What the user doesn't see

What the user sees



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What the user doesn't see



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Responsibilities

- May not be IT's responsibility (CCTV, lifts, etc)
- But needs IT co-ordination
- If not co-ordinated
 - Chaotic ... Random IT and Estates Staff
 - IT Staff on
 - Difficult to c
 - Confusion
 - Frustration



Relationships

- Crucial and vital
- Select the correct IT Lead
- Give and take ... you will not achieve



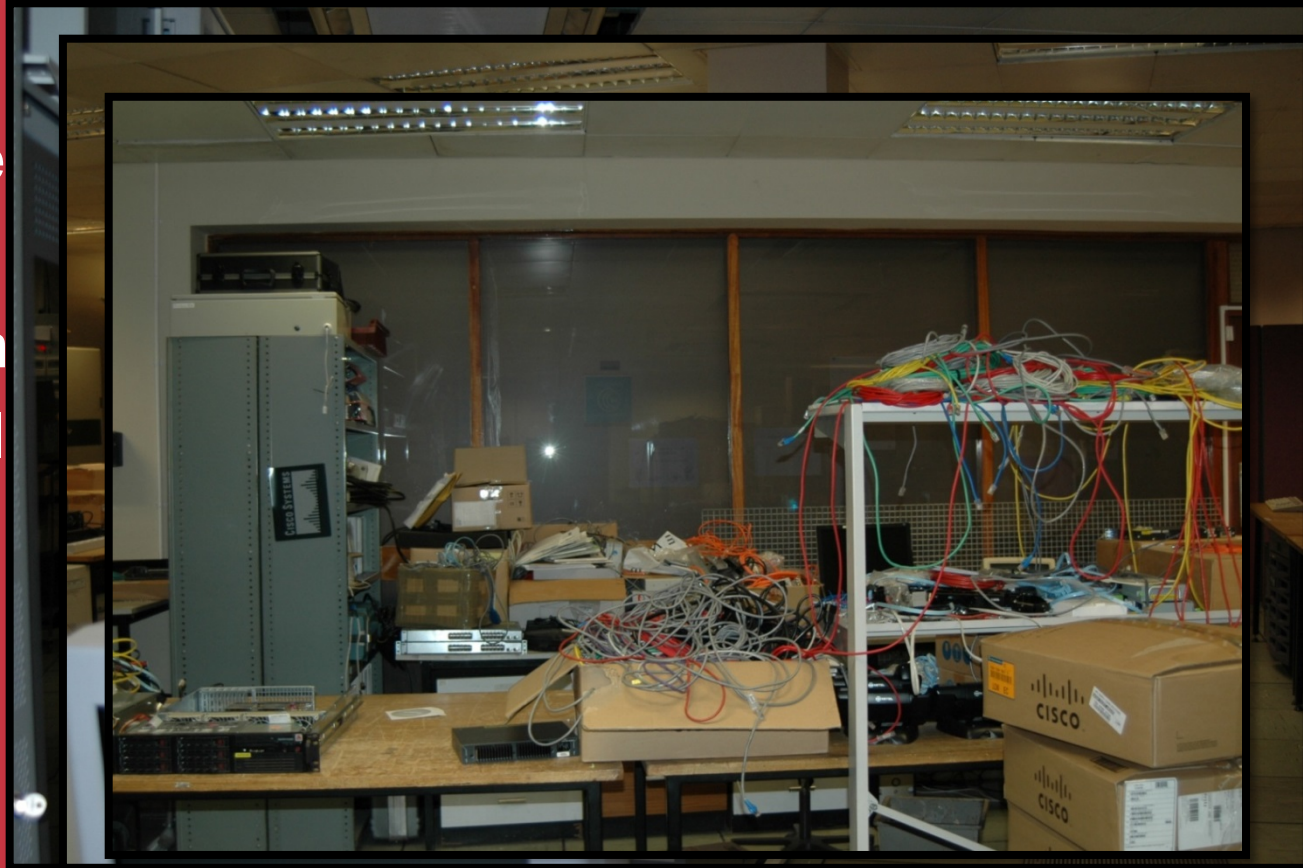
Communications

- Meetings
 - Site, project, planning, etc
- Avoid a communication mesh
- Project lead and communication



Data Centre Refurbishment

- 30 years old
- Illegal refrigerant
- Faulty air con
- Fly-tipping site
- Whole session
- Took over my l



Scope of Project



- Modular in design
- Max 50 cabinets, day one 20 cabinets
- Air Con 100KW (N+1)
- Generator: 450KW
- UPS: 10 mins
- Fire Suppression
- Early Warning Smoke Detection
- Minimum downtime
- Relocate all equipment into new cabinets

Know your place

- IT staff are engineers but IT staff are not M&E engineers
- Estates Staff Are M&E engineers but not Software engineers
- Domestic computing is not engineering
- DIY/Domestic construction is not engineering
- Need to r



Joint Project

- ITS nor Estates with experience in data centre builds
- Data Centre Specialists are essential
- Must Harness the talent in IT and Estates



Before and After

- From chaos and mess
- Transformed into a modern installation



Observations from Data Centre



- IT (we) are the clients
- If you don't ask you don't get
- Omissions, additions and variations try to balance but be aware of budget
- Be clear on lead times: equipment, IT Staff, resources, etc
- Estates and ITS Must work together
- Meetings, roles, communications, etc are all crucial
- Avoid:
 - Retrospective experts
 - Local design experts
- Do not change the Specification/Brief
- Conclusion ...Really need written IT specification

IT Specification



- University of Houston
 - <http://www.uh.edu/plantops/departments/fpc/master-specs/>
- Warwick University
 - http://www2.warwick.ac.uk/services/its/service-support/cabling/telecommunications_cabling_specification_v4.pdf
- Leeds University
 - <http://iss.leeds.ac.uk/downloads/ITCablingStandard.pdf>
- **PSA schedule of rates for building works**
 - ISBN:0117068314 ... 600 Pages

BU IT Specification



- BU IT Standards
 - Keep it short, pages of details are never read
 - Based on repeated questions from Contractors
 - Not just the infrastructure
 - Cabling standards in Measured Term Contract
 - Specific to Bangor

BU IT Spec (extracts)



- Not just cable standards
- Hand over procedure
- Drawings
- Tests and Certificates
- Labels
- Details of minimum specification for all IT services and infrastructure
- Program of work (installation, lead times, etc)
- Strip Out
- ... and everything else which has been discussed here

Rathbone 2012



- Rathbone
- May 2012
- £3 Million Refurbishment
- Change of Use:
 - Halls to Office
- Theory into practice
- IT Standards
- Started to quote the spec
- Determination



Successful Project



- Data room to our specification: a room, 32A, Air Con, cabinets, lights, cable trays, etc
- Observed 10% of cable tests
- Reviewed all certificates
- Wifi APs in the correct locations
- Best labelling ever
- Commission program scheduled around LAN availability
- Co-ordinated and structured use of IT staff
- No site visits for faults
- Drawings with IT's layers added

Garth Halls

- Halls Refurbishment - Garth
- £4 Million project
- September 2013
- For the first time:
 - IT is now a stakeholder
 - ITS at feasibility
 - Specification review
 - IT Standards submitted
 - APs CAD layer
 - Site meetings
- Success



Approve or Reject

- IT can approve or reject the work
- The ace up the sleeve is ...

- Connect to ... by



Pontio

- Pontio. September 2014
- £40 Million Project
- 2000 data points



Centre

Summary



- Building Refurbishment
 - Reichel Summer 2011 ... shambolic
 - Data Centre Refurbishment Autumn 2011 ... complex
 - Rathbone Summer 2012 ... determined
 - Garth Summer 2013 ... successful
 - pontio 2014 ... so far so good
- IT Specification has transformed our working practices

Conclusion



- Create an IT specification document
 - Review frequently
 - Include the IT specification in the ITT
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- A thank you to David Round for major input into the IT Specification



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