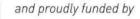# What are the day-to-day challenges to keep the lights on and the systems running?

Brad Evans
Head of Centre Operations
Pawsey Supercomputing Centre

Pawsey
Supercomputing Centre

Start with the build.

- What did we do right

- What needs some work

Building ✔

Modern facility.

Public Viewing Area

3 metre Under – Floor Space

Exhibition Area

CSIRO Relationship

3D Visualisation room

Building

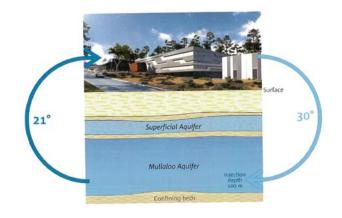## Design v Build v Use

Concept v Reality

Did I ask for that?

Not quite right

Storage

Power
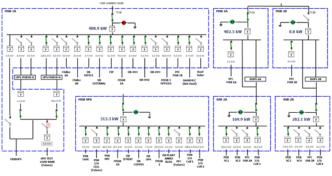
Electricity Supply is Stable

Dual Power Feeds

Solar Array

RUPS
and
UPS

Power

Electricity Supply is Stable

Dual Power Feeds
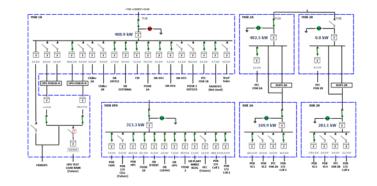
Maintenance

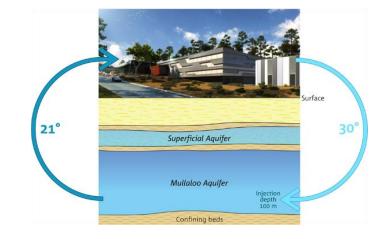RUPS

SPOF in Cooling Loops
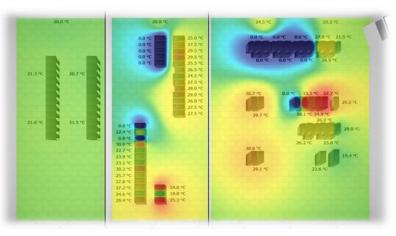
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Cooling

Ground Water Cooling

Water Savings

Monitoring, Alerting & Reporting

Power Savings
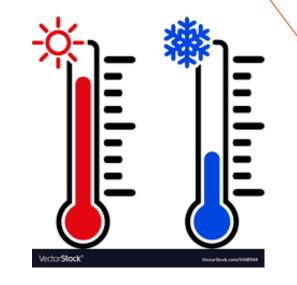
Cooling

Humidity and Temperature Ranges

Bore Maintenance Costs

Heat Exchanger cleaning

Supporting Systems
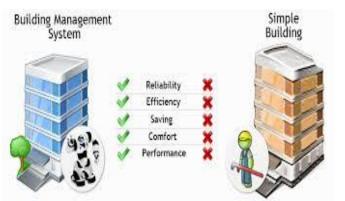

Networks

Fire Suppression

Monitoring / Alerting

Building Management Systems

Security

More!

Day to Day Challenges

- Not always hardware related
- Technology focus
- Relationships
- Expectations
- Funding

Moving Goal Posts

- Scope creep,

- moving goal posts,

- expectation adjustment,

- anti-pattern…

- Different terms for the same thing, but you can't escape it, so manage it well!

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Biggest Challenge Expectations

Biggest Asset People

175   86   30   18

PAWSEY supercomputing centre

Final Words

Benjamin Franklin is credited with saying;

"If you fail to plan, you are planning to fail"

When it comes to designing, building and maintaining SC and Data facilities:

- Understand the costs, but don't let that be your only focus.
- Don't be too proud to listen to others and engage specialists.
- Talk to other centres (operational staff) about their challenges.
- Be clear about what you want/need and ensure you get it.
- The building will be there for many iterations of the systems it houses.
- Beg, borrow or steal* money from wherever you can to get it right.
- Find good people and listen to them, they will be your greatest asset.

* expression, don't do this!

Thank you

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