



BMS CONTROL SYSTEMS

Continuous improvement for all buildings

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Agenda

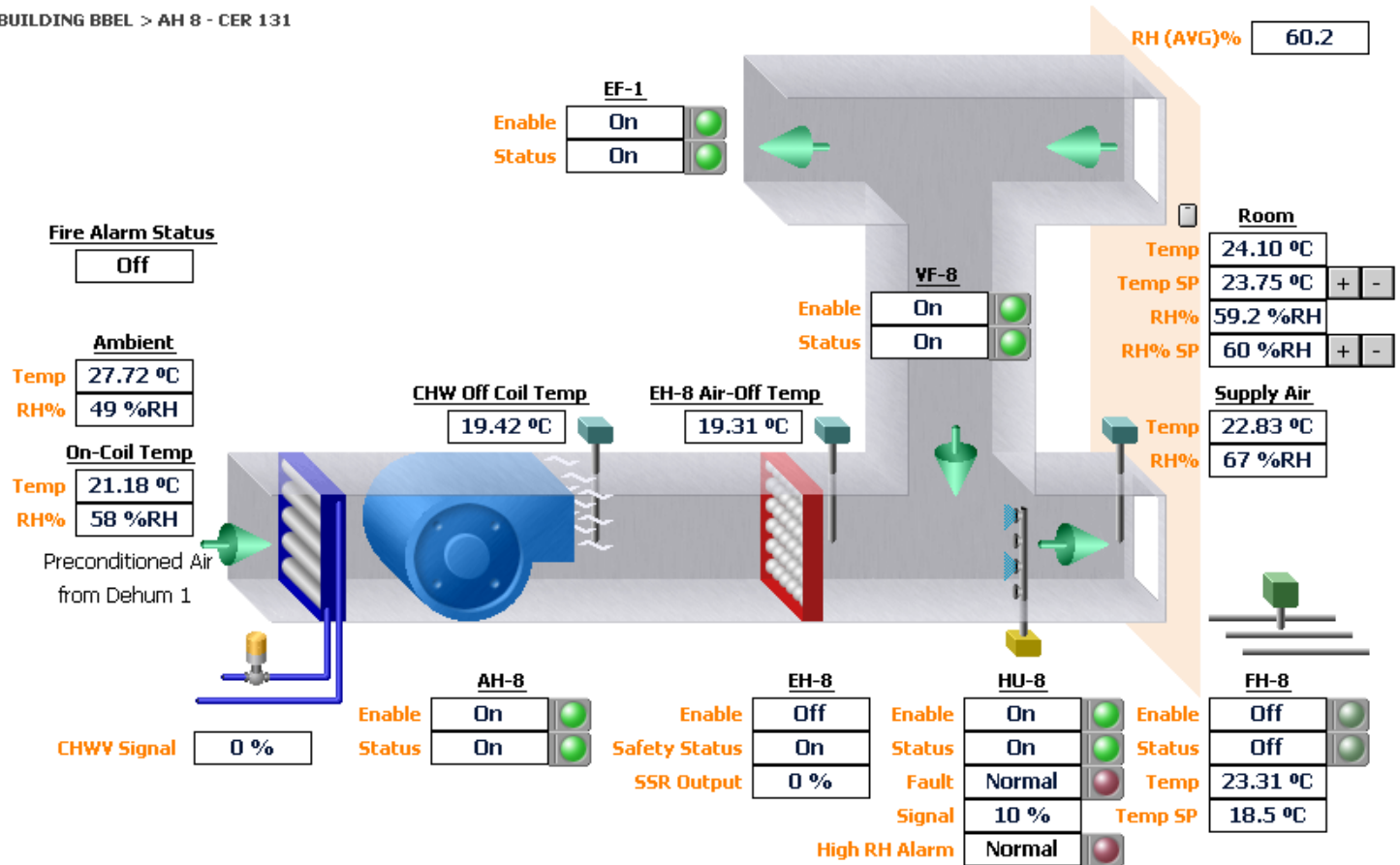
- ✓ Role of BMCS
- ✓ Troubleshooting



Role of BMCS

You are here: CAMPUS BMS > BUILDING BBEL > AH 8 - CER 131

- > BBEL
 - > Homepage
 - > Air Handling Unit 8
 - > CER Room (131)



Indoor Environmental Quality



IEQ

- Indoor Air Quality (IAQ)
- Thermal Comfort

Occupant Well-being

- Health
- Productivity

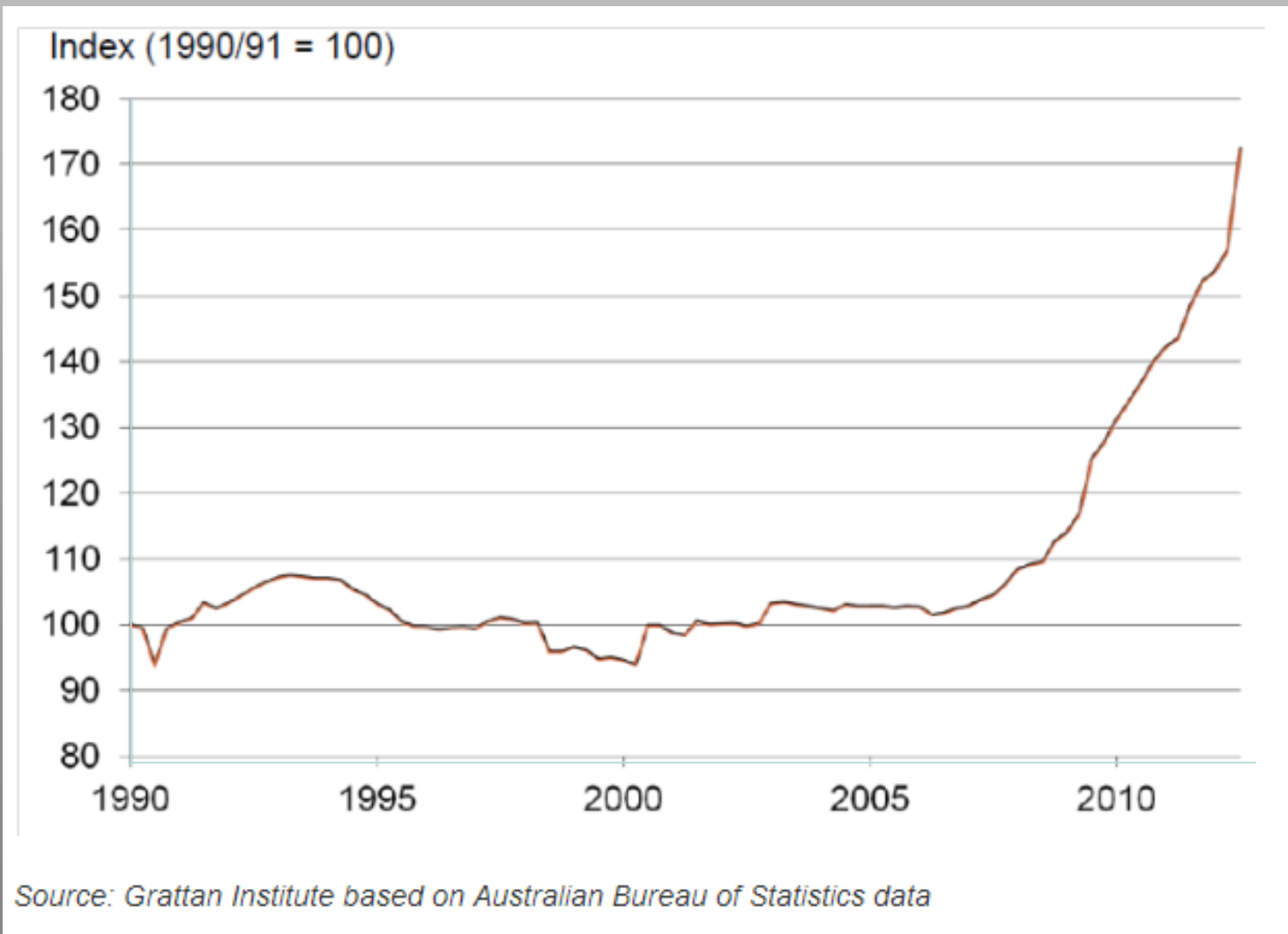
Risk Management

- Liability

Facility Operations

- Energy
- Operations/Maintenance Expense

Energy Inflation

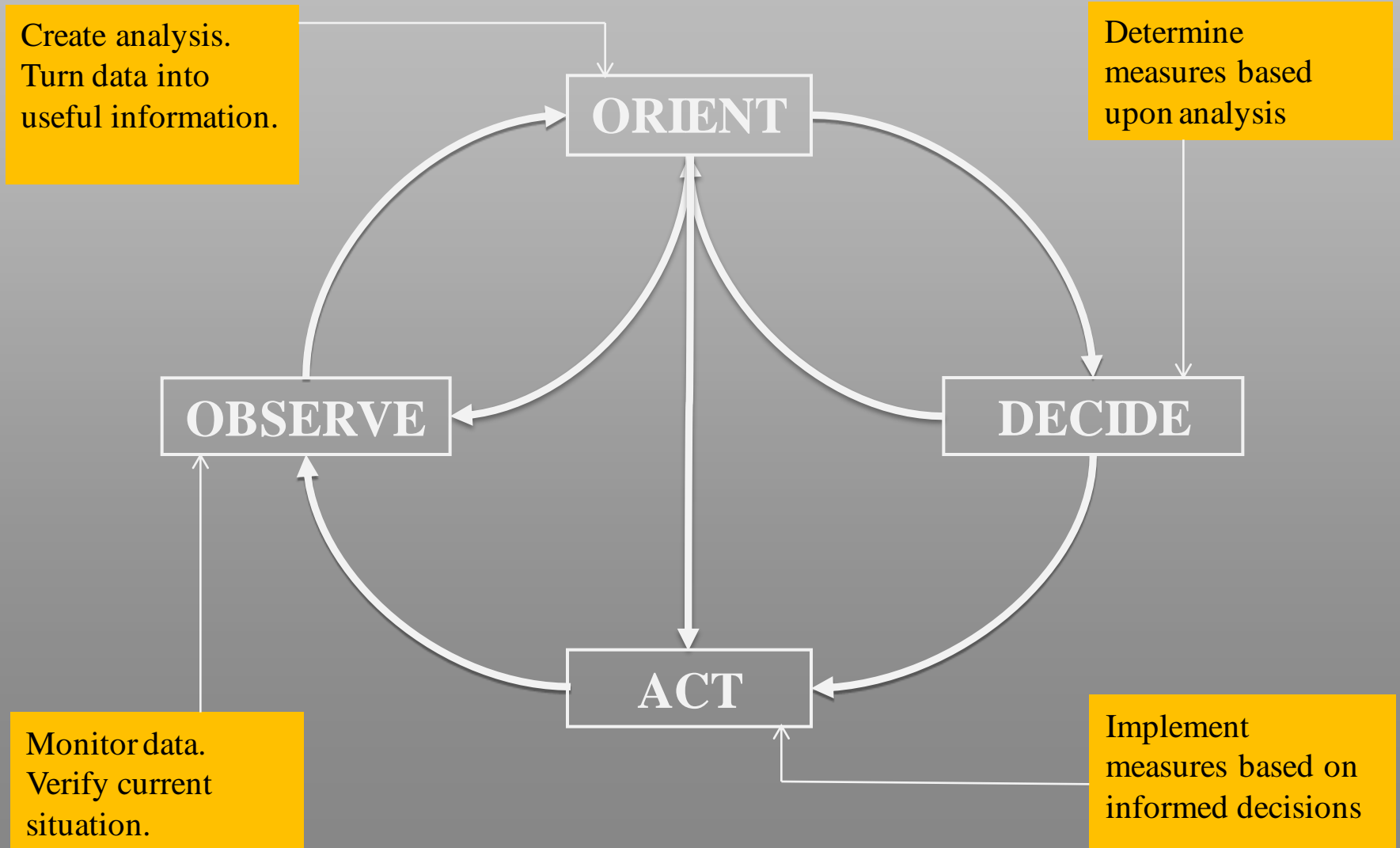


Common problems

- ❖ Comfort (air flow, glare, noise, odors, too hot/cold)
- ❖ Excessive energy use
- ❖ Premature equipment failure
- ❖ Poor usability

There is a “cost” to the owner for each of these problems.

Framework



Priorities Consensus

Objectives	Key Features	Major Benefits	Limitations
<p style="text-align: center;">BMCS For Troubleshooting</p>	<p>Primarily HVAC</p>	<p>Foundation for all system tracking and optimisation</p>	<p>No data summary for the big picture</p>
	<p>Ability to set up trends, event logs and alarms</p>	<p>Ability to view details of system operation to pinpoint problems</p>	<p>Often not configured to include energy data</p>
	<p>Use to troubleshoot problems by observing system operation, trends</p>		<p>Alarm capability covers only basic faults</p>

Visualization & Information

Fume Hood Status

387 Actual

402^{CFM} Optimal 123^{CFM} Wastage

Room Air Quality

CO2 Count	VOC Count	IAQ
67	63	59

Alarm Status

	Hood 2 Room 1, Build'g 3	11:54 AM Today
	Hood 1 Room 3, Build'g 3	10:23 AM Today
	Hood 1 Room 3, Build'g 3	09:56 AM Today
	Hood 4 Room 2, Build'g 3	09:43 AM Today
	Hood 2 Room 2, Build'g 3	09:12 AM Today
	Hood 2 Room 3, Build'g 3	09:02 AM Today
	Hood 1 Room 2, Build'g 3	08:47 AM Today

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Hood Certification

Hood 10	Next certification due date Aug 10, 2012
Hood 3	Next certification due date Aug 13, 2012
Hood 9	Next certification due date Aug 15, 2012

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Hood Status

Hood 1	Optimal Flow 200 CFM	Actual Flow 66 CFM
Hood 2	Optimal Flow 200 CFM	Actual Flow 66 CFM
Hood 5	Optimal Flow 200 CFM	Actual Flow 66 CFM

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Air Flow Status

612 Actual

597^{CFM} Optimal 243^{CFM} Wastage

Room Conditioning

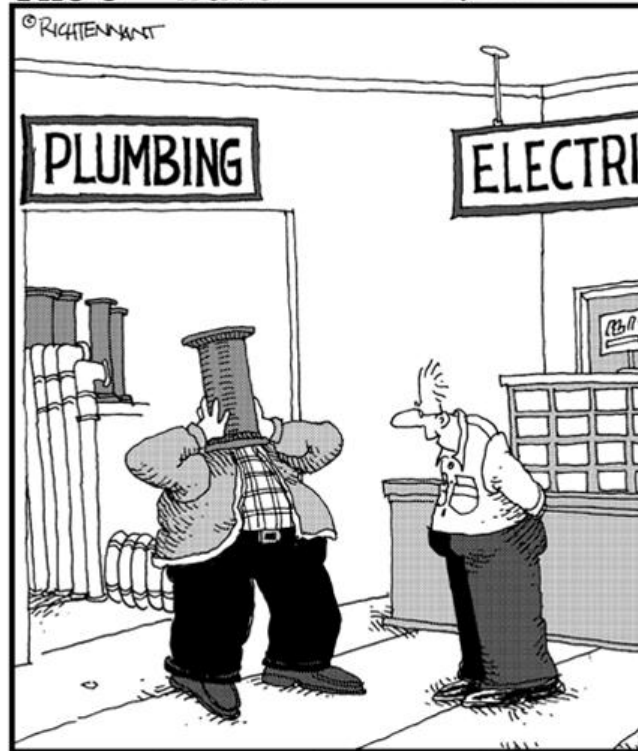
Room Temperature 67 F	Humidity 53%
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Monitor Real Time and Historical for Energy Savings



The 5th Wave

By Rich Tennant



"Something I can help you with, sir?"

Thank You