

BRE

Experience and Development of Training for Open Controls

Graham Webb



Overview

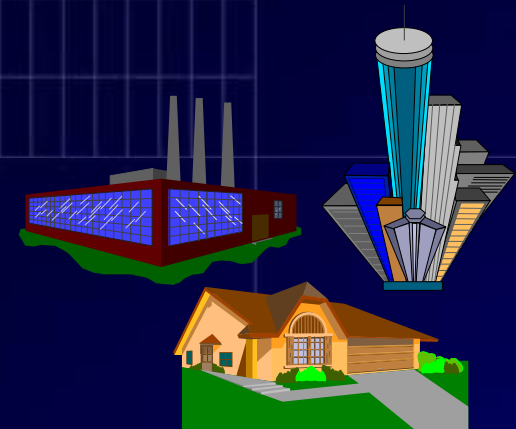
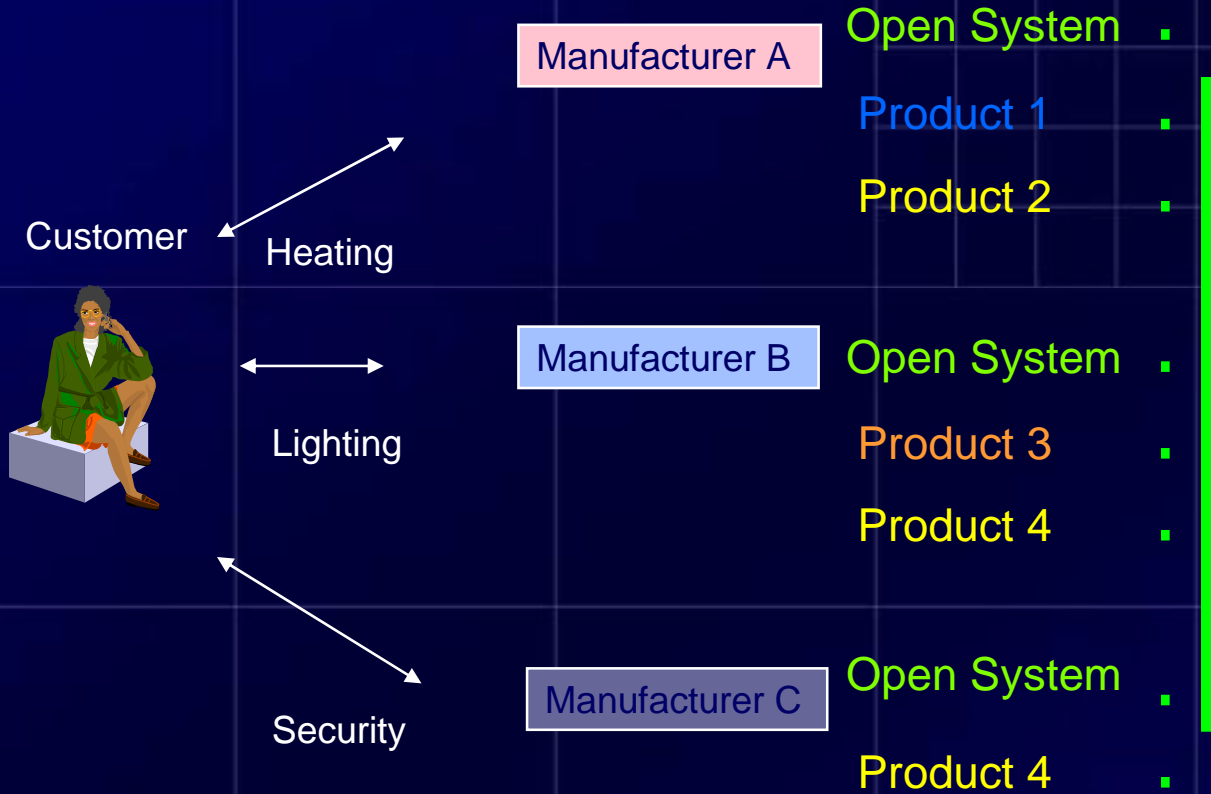
- | Control systems overview
- | BRE's background
- | Our experiences in providing training
- | Controls system design Skills
- | Challenges and opportunities

Control Technology Applications

- | Lighting
- | Heating
- | Shutter and blinds
- | Heating, ventilation and cooling
- | Security
- | White goods
- | Potentially fire alarms
- | Visual displays
- | Remote control and monitoring

....combinations of all these!

Open Control Systems



.... interoperability is the key

Controls and much more for smart homes...

- | Share internet access via a home PC network
- | Telephone, audio and video networks
- | Access control and security combine with CCTV
- | Energy saving
- | Remote monitoring of systems and appliances
- | Safety systems for fire and other hazards
- | Assistive devices for the elderly and disabled
- | Electricity, gas and waters consumption monitoring
- | Remote fault detection and diagnosis

... it's also lifestyle thing!

Various Media options

I Cable

- Y robust
- Y secure
- Y cost effective, particularly for new installations

I Power Line

I Wireless

Both Power Line and Wireless offer flexible solutions and will be pivotal in opening up existing housing market

....combinations of all three!

Target Group Needs

- | energy saving
- | support for daily living
- | emergency support
- | working from home
- | health and social care
- | greater security and safety
- | tenant interaction
- | lifestyle benefits

... specialist knowledge needed

Meeting User needs

Identify needs
of target
group

Select
appropriate
solutions

Implement

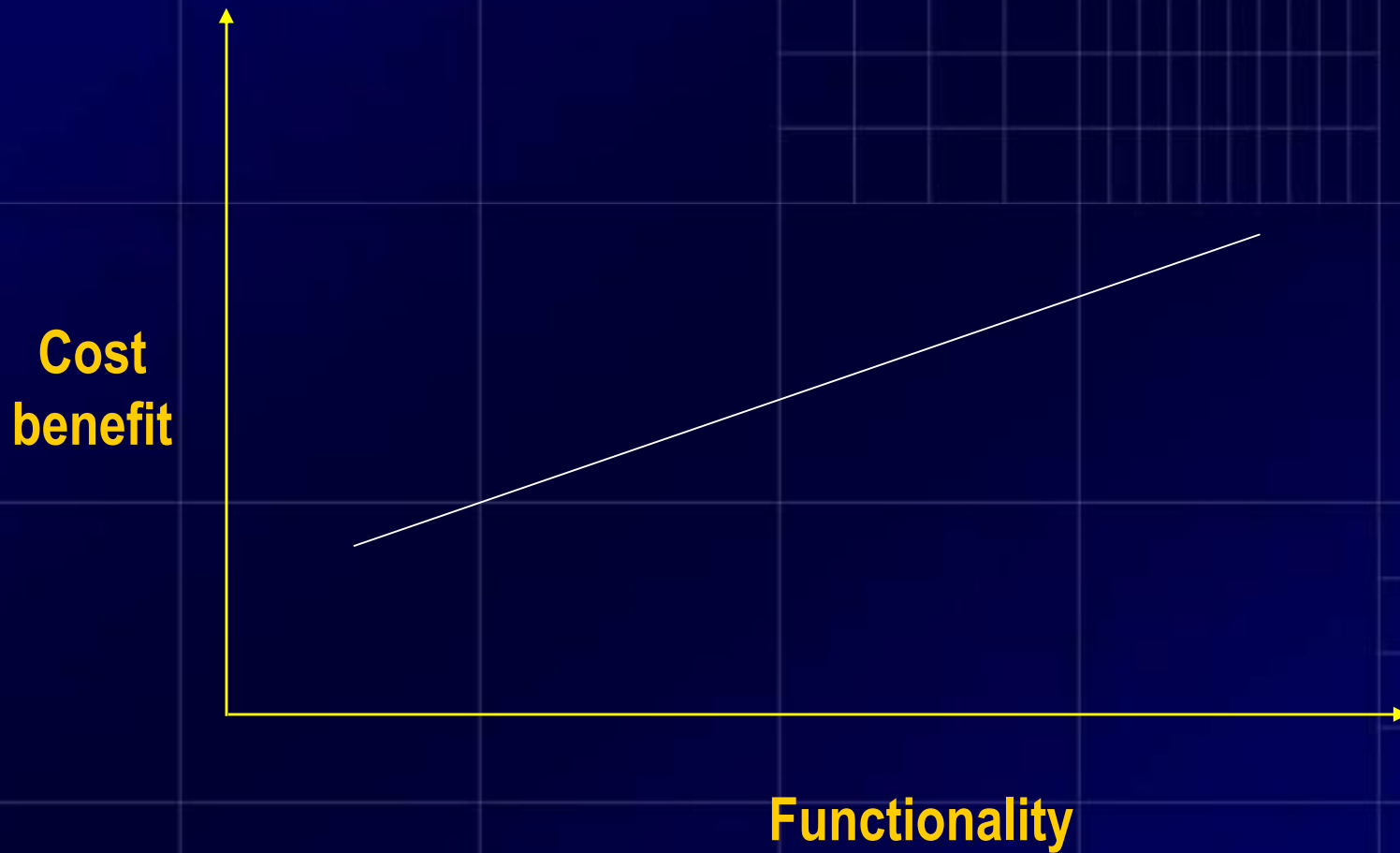
Support,
maintain and
enhance

Benefits of Open Systems

- | Increased control options
- | Increased flexibility
- | Increased functionality at lower cost
- | Potential energy saving
- | Reduced re-design costs
- | Remote monitoring and control
- | Short reconfiguration time

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Open Controls Technology



BRE's Training Background

- | A wide range experience with all aspects of construction
- | A long history in building services
- | Started providing training for Open Controls Systems in 2000
- | Currently offering one day and five day Konnex/EIB training
- | In addition, we have provided:
 - ÿ Two day Installation and Commissioning training courses
 - ÿ One day Home Network training courses
 - ÿ Half day installation briefings
 - ÿ Presentations for building services seminars
 - ÿ Workshops for developers
 - ÿ Video link presentations

Initial Experience in providing Courses

- | Delegates attending early courses had limited exposure intelligent building/smart home concepts
- | Delegates also had no or limited exposure to software programmable systems
- | We needed to engage with manufactures and customer groups, such as developers and housing associations, to promote the concepts via seminars and short courses
- | Focus of interest in domestic sector.

Recent Experience in Providing Courses

- | Greater awareness of basic intelligent building concepts, but not the full extent of what can and is being achieved now

Delegate Backgrounds

- | Electrical contractors
- | Process Control
- | IT Networks
- | Computing
- | Care home technology
- | Still the feeling that greater understanding of the capabilities of intelligent building is needed in customer groups

Control System Design Skills

More than just controls skills.....

- | Needs analysis
- | Creativity
- | Aesthetics
- | Cost benefit
- | Whole life value
- | Flexibility and adaptability
- | Environmental and sustainability issues
- | Needs of specific customer groups
- | Higher levels of customer service

Control System Design: Energy Savings

- | Heating control for individual rooms
 - Ÿ Time and temperature control
- | constant lighting control
- | Lighting when needed (light sensors, PIRs)
- | Performance monitoring
- | Smart appliances

Control System Design: Health care

Support for:

- | daily living and improve quality of life
- | motivating healthy behaviours, prompting
- | movement tracking and mapping
- | disabilities
- | dementia
- | carer notification
- | remote monitoring and diagnosis

... and much more

Control System Design: Media options

- | New house installations predominately wired
 - Ÿ New build: ~200 Thousand annually
 - Ÿ ~10% new homes with networks for computing, audio and TV
- | Existing houses need mixed media control solutions
 - Ÿ Existing buildings 25 Million +
 - Ÿ Wired, powerline and wireless solutions needed

Smart homes have a positive future

- | Increased exposure to concept
- | Open Standards from home automation
- | Existing and emerging standards for home networks
- | Increased product availability for UK market
- | Improved integration of network media options
- | Development of integrated content services (TV and Internet)
- | Plug and Play systems from home automation
- | Developers increasing understanding of potential
- | Contractors gaining experience

Challenges and Opportunities

- | Continue to increase exposure of intelligent building concepts to:
 - customer and industry groups
- | Address technical needs of different trainee groups
- | Extend technical training and updating
- | Address wider skills issues
- | Extend understanding energy saving issues and opportunities
- | Extend understanding of health care issues and opportunities
- | Encourage interaction within the industry groups

... BRE is well place to move the agenda forward

BRE Moving the Agenda Forward

- | Continue to provide controls training
- | Increase the scope of related training
- | Continue to raise awareness of intelligent building concepts through BRE events
- | Continue to run intelligent building specific events
- | Work with partners to progress intelligent building agenda
- | Work with partners develop demonstration facilities at BRE
- | Establish working groups to take forward specific issues

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Thank you for your attention.

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