

Product development for 02 December 2010 smart meters & home energy monitoring © CAMBRIDGE DESIGN PARTNERSHIP

Presentation outline

- Case study: Navetas Smart Hub
- Routes to market
- Rapid development of working prototypes
 - Establish brand identity
 - Design user interface concurrently
 - Address sourcing issues early
 - Design in flexibility



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Case Study | Navetas Smart Hub

Product has 3 key functionalities:

- Interface with electricity, gas, water meters
- Disconnection switches for:
 - pre-payment electricity
 - pre-payment gas
 - Economy 7
- Appliance disaggregation technology





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Conventional project:





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Conventional project:





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Navetas Smart Hub:



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Navetas Smart Hub:



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Rapid development of working prototypes

• SINGLE iteration to "works-and-looks-like" model, including:

- Establish brand identity
- Design user interface concurrently
- Address sourcing issues early
- Design in flexibility

 Multi-disciplinary concurrent design - all technical skills + astute project management under one roof at Cambridge Design Partnership



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Rapid development of working prototypes How rapid is "rapid"?

 Navetas Smart Hub: from project kick-off to fully working and styled prototypes now working in real houses:



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Rapid development of working prototypes How rapid is "rapid"?

Navetas Smart Hub: from project kick-off to fully working and styled prototypes now working in real houses:

3.5 months



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Product development aspects Establish brand identity





NAVETAS

NAVETAS SMART HUB

16.40

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Product development aspects Design user interface concurrently





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Product development aspects Design user interface concurrently





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Product development aspects Design user interface concurrently

- Empower the consumer with an understanding of complex data
- There is plenty of data to present to the user, but it must be approachable
 - Prepayment: single knob/button interface with simple text screen
 - representation on website, dedicated table-top "dashboard", smart phone
 - use of graphics, colours
 - intuitive interaction with user
 - design consistent across product range





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Product development aspects Address sourcing issues early

- Sourcing considerations affect design from outset:
 - Supplier assessment, e.g. support levels
 - Component manufacturer technological capability, for custom components
 - Component costs -> target finished product cost
 - Supply situation EOL, lead times, advance purchases, equivalent parts
 - Commercial aspects of potential supply agreement for high-volume production
 - Involve intended volume distributors at early stage





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Product development aspects Design in flexibility

- Versatile, expandable, upgradable:
 - Software:
 - Portable architecture between different environments
 - Reusable across product range
 - Common communications, between internal blocks and with external systems
 - Electronics:
 - Expansion ports
 - MCU family with scalable features
 - Alternative and reconfigurable circuitry





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Understand the route to market, and tailor the development approach to suit.

Cambridge Design Partnership

Think differently.