

Boston I London I Cambridge



## Moving M2M to the Next Phase: What is the Internet of Things?

May 14, 2013

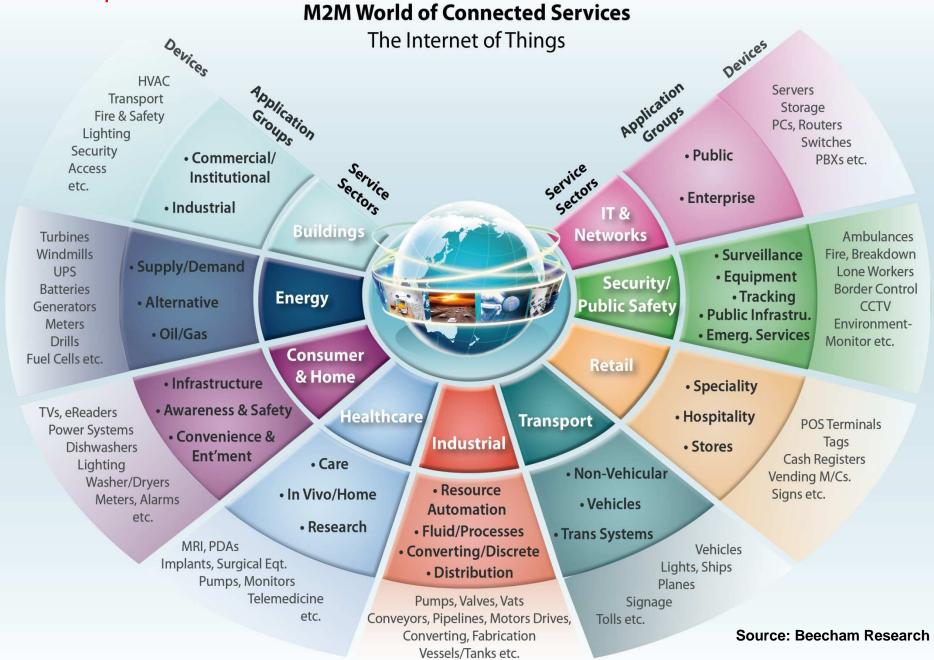
Robin Duke-Woolley CEO, Beecham Research Ltd.



## Internet of Things – Do We Need to Define It?

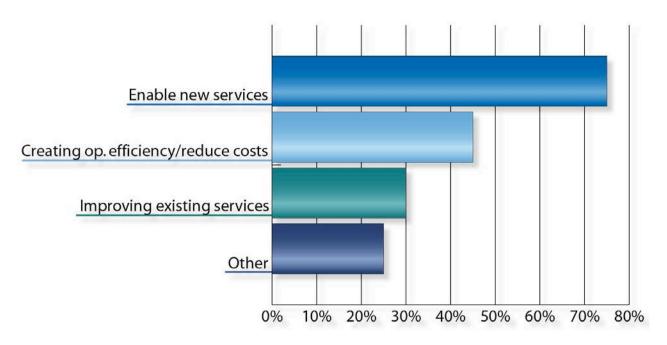
- 1. Lots of hype
- 2. Lots of different definitions
- 3. Is it an important development?
- 4. Not down to one market player to create needs to be a worldwide effort
- 5. If we can't agree what it is how can we build it?
- 6. Needs to build on what's already there
- 7. Not starting from scratch . . .





#### What are the primary drivers behind your M2M projects now?

#### <u>Survey of M2M Solution Providers published November 2012:</u>



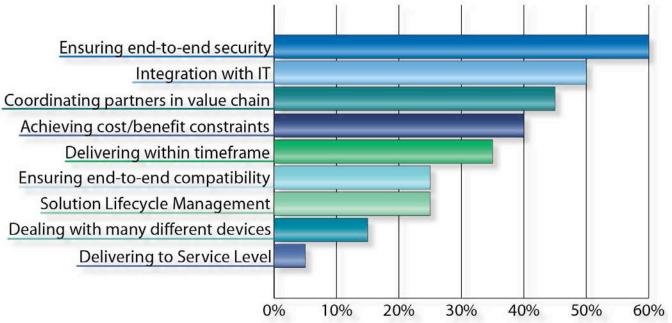
Source: Beecham Research Sept 2012, for Oracle

- M2M has always been about creating new differentiation in the market
- M2M used to be about operational efficiency, and reducing costs
- Now increasingly seen as enabler for new services



## Which of these are top 3 priorities for delivering M2M projects?

#### Survey of M2M Solution Providers published November 2012:



Source: Beecham Research Sept 2012, for Oracle

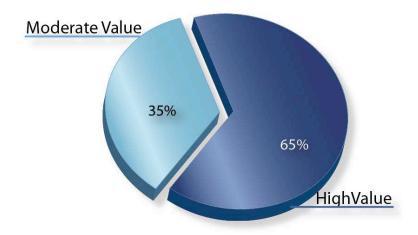
- Top 3 priorities seen as:
  - Ensuring end-to-end security
  - Integration with IT
  - Coordinating partners in value chain



# PDF Compressor Pro What value can be gained from Complex Event Processing?

#### Survey of M2M Solution Providers published November 2012:

- Not so much from existing M2M applications: major opportunity for future B2B and especially B2B2C applications
- Insight from real-time intelligence "can open up a whole new world of solutions". Next generation of applications



Source: Beecham Research Sept 2012 for Oracle

- Examples: several data sources contributing to a decision process without human intervention:
  - Weather conditions in agriculture management
  - Predicting performance/failure of large population big generators in the field
  - Pollution management
  - Traffic management
  - Real time human behavior profiling, facial recognition



#### M2M is:

- 1. B2B, B2B2B . . .
- 2. Very broad Covers many sectors and sub-sectors
- 3. Very silo-based. Service providers sector-based . . . typically sub-sector based
- 4. Efforts to reduce cost and time to market M2M platforms (M2M Service Enablement Services)
- 5. Looking for greater enterprise integration
- 6. Opportunity to use cross-sector and cross-company data to create new services
- 7. Focusing more on use of data, less on connectivity: Opportunity to make greater use of more data
- 8. Opportunity to move from "monitoring" to "optimisation"
- 9. Industrial Internet . . . "M2M on steroids"



# Consumer-relate: One piece of data – multiple sectors



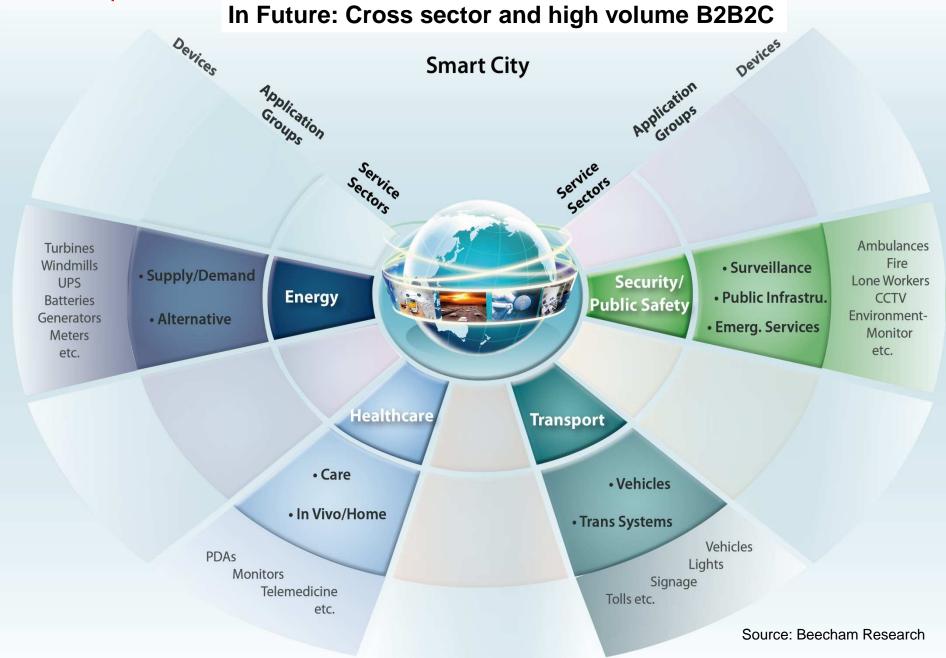
- 1. Energy-related
- 2. Social care-related
- 3. Family-related
- 4. Security-related
- 5. Consumption-related
- 6. Others?



## Heading towards an environment where:

- Data from one connected device provides value for many different players
- 2. New value from using data from several different sectors. Cross-sector applications
- 3. Unintended consequences of first two? E.g. Privacy and use of data issues
- 4. Where there's new value, new roles can be created
- 5. New roles through new business models B2B2C business models are not mature compared with B2B2B
- 6. Who to provide infrastructure to enable this?
- 7. Who to add value across sectors?





#### **Definition? – Applying focus to different support needs**

## M2M/ Industrial Internet

#### B2B2B:

- Enterprise driven
- IT integration
- Some cross-sector data combined
- Much more intercompany sharing
- Data analytics
- Strategy development
- New business models
- New security requirements

M2M Future

M<sub>2</sub>M

Now

## IoT Future

#### **Consumer focused**

#### **B2B2C**:

- May be Govt./City in second "B"
- Consumer Lifestyle services (B2C)
- Combining cross-sector mass data
- Real time data stream analysis e.g. video
- New business models
- New market players
- New security requirements

Source: Beecham Research

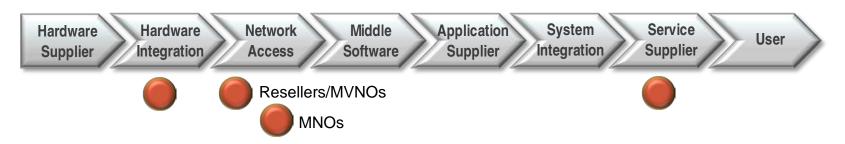


## M2M Value Chain – Who's addressing the market?

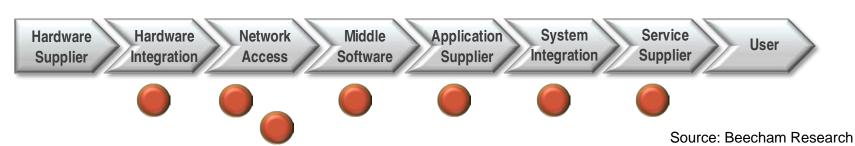
#### Early M2M market:



#### M2M market now:



#### M2M/IoT market future:



Future: More players addressing more application areas



## PDF Compressor Pro Consumer Focused Example – Wearable Technology



**From Functional** 

to Usable

to Wearable





## **Examples of Wearable Technology**

















## We need to look at real people . . . .



#### What would inspire these girls to buy WT?

- Age 18-35
- Sharers and cohabitees
- Urban flats
- Upmarket areas



#### What about her?

- Age 18-25
- Often living with parents
- Wealthy homes
- High disposable income

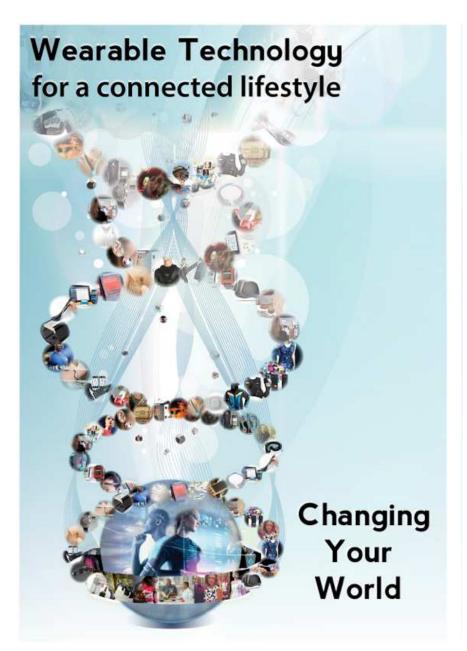
These are examples of fashion industry early adopters . . . but for WT?



#### PDF Compressor Pro **World of Wearable Technology Applications: Function With Style** Connectioned •Real-Time Data ·Playful Show •Remote Team ·Ambience Through Monitoring Military Pror Gas Mass Liaht Security Profiling Emergency Light Services **Embellishment** Hazmat Pattern Changing Identity Recognition Detection Decorative Display Environment Track/Display •Remote Surveillance Security **Emotions** Emotional Monitoring Glamor Rescue/Tracking Safety Response Unobtrusive Vital Signs Access Voice, **Patient Monitoring** B Teedback Pate Personal Monitoring Text, Email Communi-Medical ·Body In Vivo/Implants Multimedia Interactive cation Augmentation Chronic Disease Group Management Use Social Media Lifestyle Physical Diabetes Care · Brain/Eye Wellness **Expression** Computing Movement Sport / ·Use Touch & Hugs ·Remote EEG, Organiser **Fitness Physiological** ECG, EMG Responsive Learning Monitoring Interactive Gaming · Weight/ Energy Ulin Pump Pr Sport Performance Data/Media Access Monitoring Schedule Fitness Monitoring ·Sleep/Emotion/ · Gait/Posture Shared Management Stress Tracking Virtual Coaching Correction Experience **Outdoor Navigation/Trackg** EEG/Optimised Learning Obesity Control Body Cooling/Heating Augmented Reality Interactive Performance Monitor •Realtime Streaming Instruction Activity Tracking •Goal Monitoring/Management ·HUD Direction Data/Location Share exted Bra Optimum Performance AR Gamin' Bry Training Sh

**Beecham** in partnership with

## PDF Compressor Pro Wearable Technology - New Market Study



- New Beecham Research study, available May 2013
- Wearable Technology market has enormous potential
- Study examines how that potential can be converted to reality
- It analyses the true market prospects and sizes the market opportunities over all sectors and application groups
- It explores the issues and challenges holding the market back and recommends how these can be resolved
- It examines the potential roles of different market players and identifies who is best placed to capitalise on the developments currently taking place.