

63rd ARGE ANNUAL CONFERENCE
Stratford-upon-Avon
10TH – 11TH September

ARGE EPD Project
Roll out plans – Why EPD?



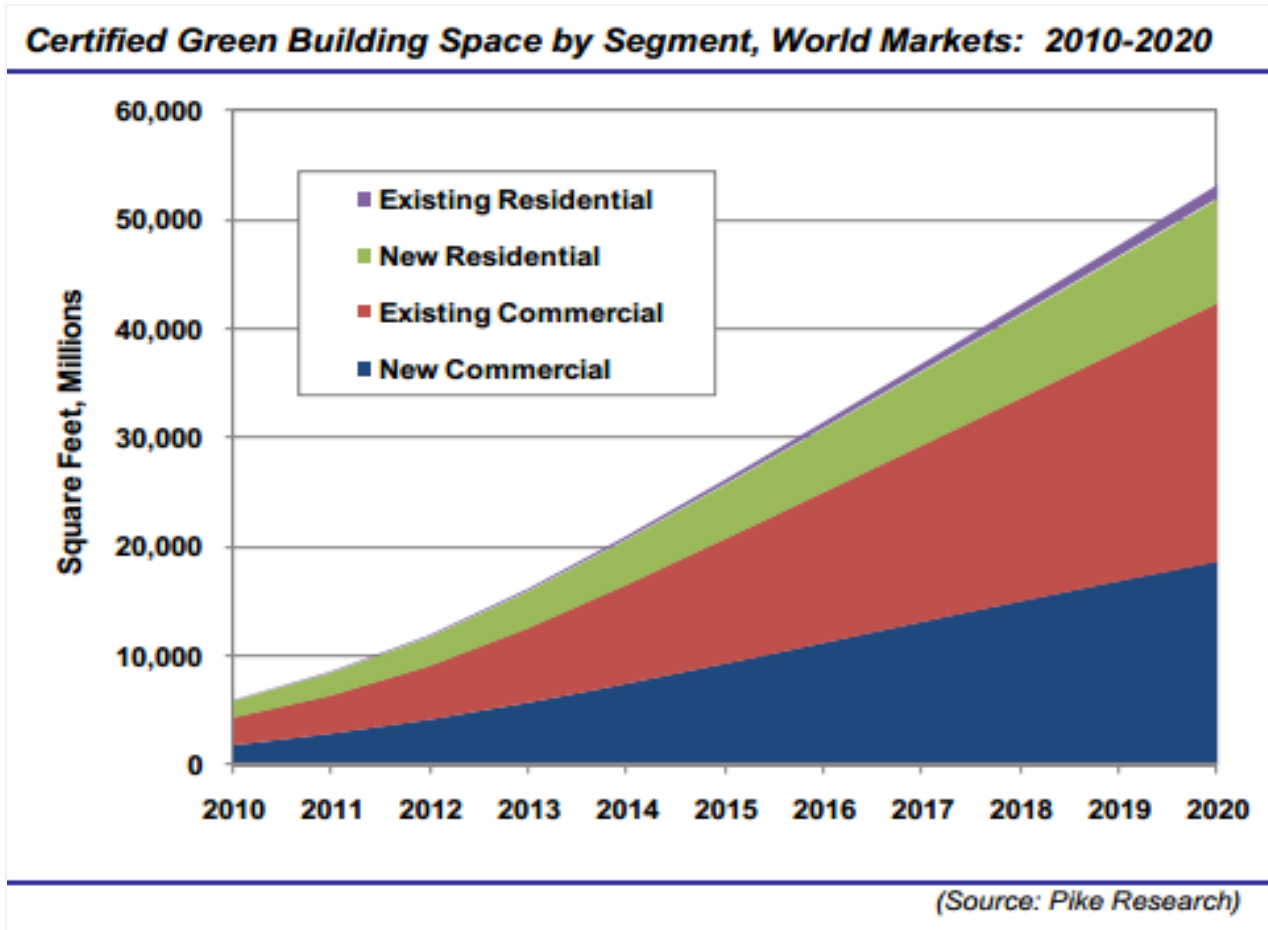
Developers Look for Green Buildings



71% of interviewed decision makers:

"In future green certification is pre-requisite for profitable marketing of buildings."

Certified Green Building Space



Fast growth rates in certified building space

New Legal Requirements



2010 Energy Performance of Buildings Directive

- All new buildings must be nearly **zero energy** by 2020
- EU countries must set minimum **energy performance requirements**
- National **financial mechanisms** to improve energy efficiency of buildings

EPD's will become mandatory...

European Commission

- Harmonised product standards for **energy efficiency**
- Construction Products Regulation will make adoption of **harmonised standards mandatory**
- **Environmental Product Declarations** will be the measure

European Directives drive national legislation

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Developments within the UK hardware industry
Paul Browne, Business Development Director, ASSA ABLOY UK
and ARGE Executive Board member



THE ELECTRO-MECHANICAL REVOLUTION

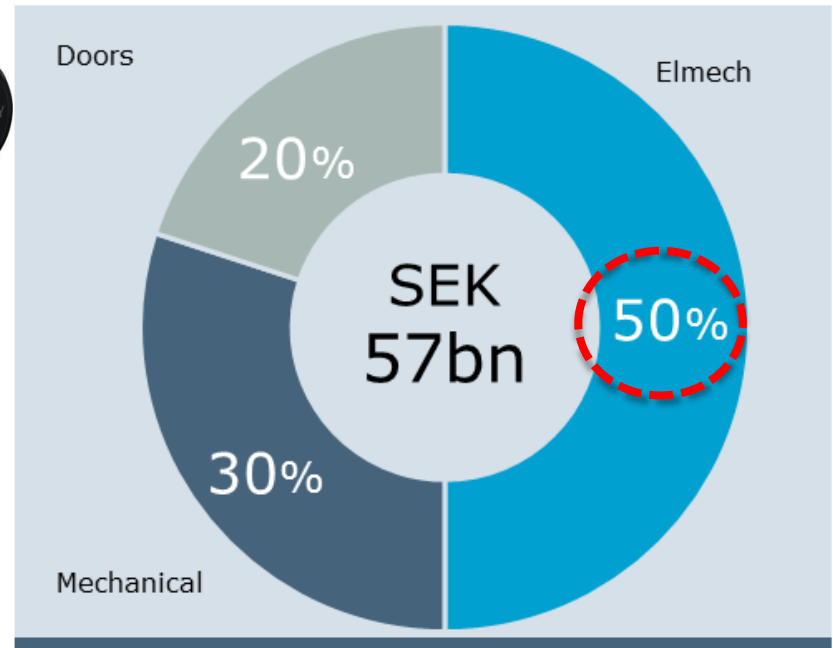
Technology is Evolving



Impact of New Technologies

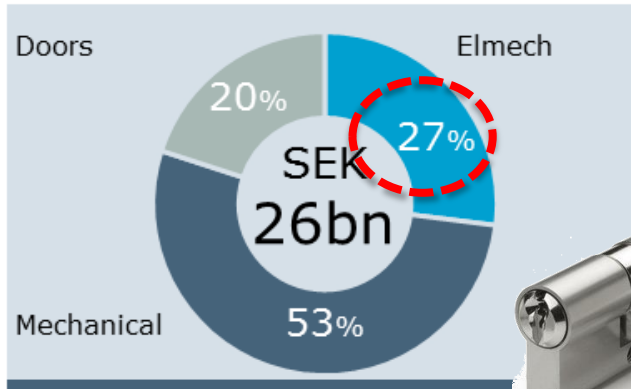
- ✓ RFID
- ✓ Mobile Internet and the Internet of Things (IoT)
- ✓ Smart phones/watches
- ✓ Cloud computing
- ✓ Wifi
- ✓ BLE/NFC
- ✓ Connectivity/convergence
- ✓ Energy harvesting
- ✓ Micro electronics/miniaturisation

Manufacturers Are Shifting To Elmech



2014

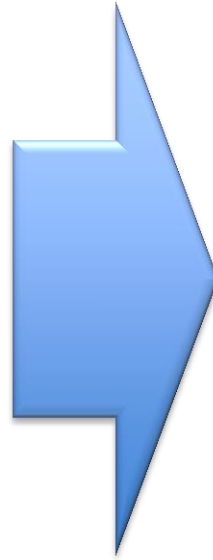
ASSA ABLOY



2004



New Credentials – NFC, BLE...What Else?



Market Issue

- Many product standards to comply with:
 - EN14846 (electromechanical locks and strikes)
 - EN15684 (e-cylinders)
 - EN16867 (electronic escutcheons)
 - EN16846 (electromechanical padlocks)
- Rate of change of technology is accelerating – need to ensure that standards keep up
- Low cost market entrants, questionable performance/safety

ARGE Role:

- Work with national associations to develop product standards
- Lobby CEN/European Commission to address undue delays in standards publication
- Promote adoption of CPR and standards at EU level to counter unregulated low cost competition

THE TECHNOLOGY REVOLUTION

The Millennials

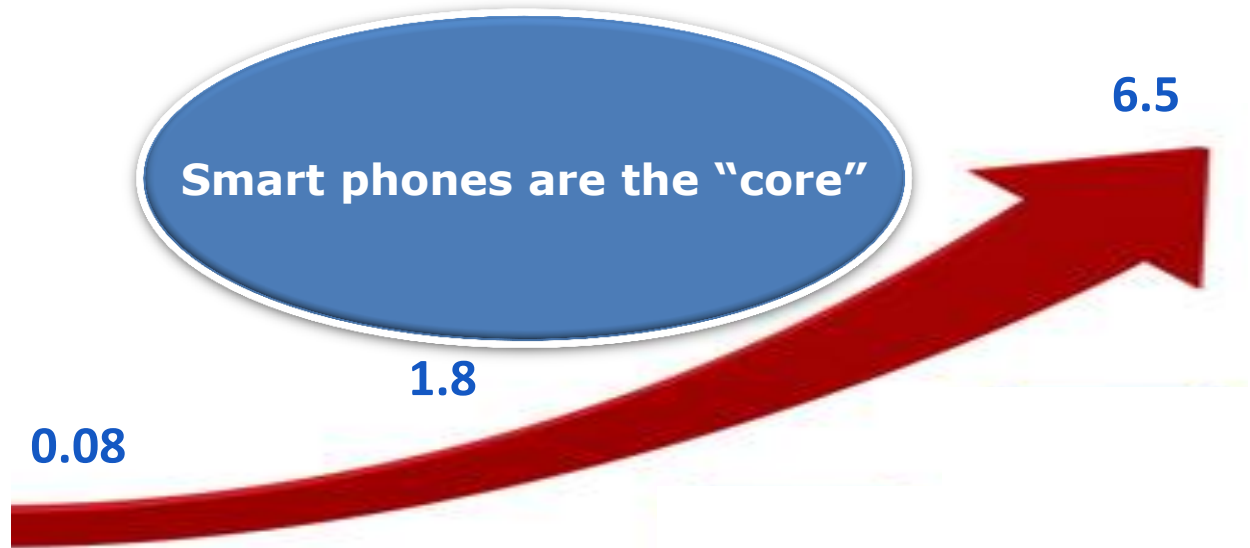
- Born between 1980-2000
- By 2020 will form **50% of global workforce**
- **Social media** generation
- 41% **communicate electronically**
- Work/life balance critical
- Used to being **connected, collaborative and mobile**

They connect with one of these....

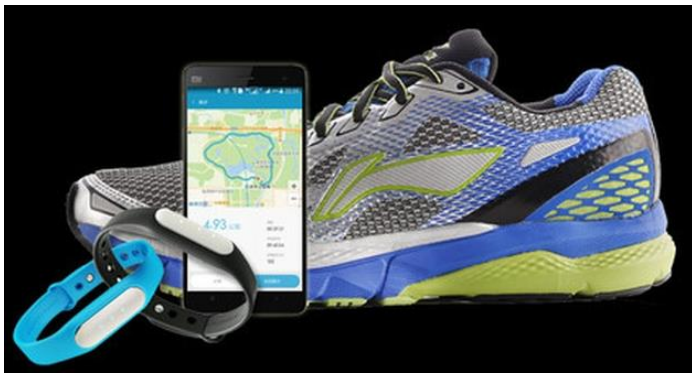


Technology Driving Change

	2003	2010	2015	2020
World Population	6.3 billion	6.8 billion	7.2 billion	7.6 billion
Connected Devices	500 million	12.5 billion	25 billion	50 billion



Mobile Internet and Internet of Things

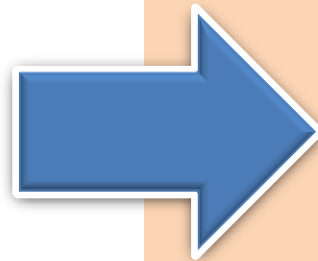


New devices appearing constantly!

The Way We Lock is Changing



Your car & your office



Why not your home?

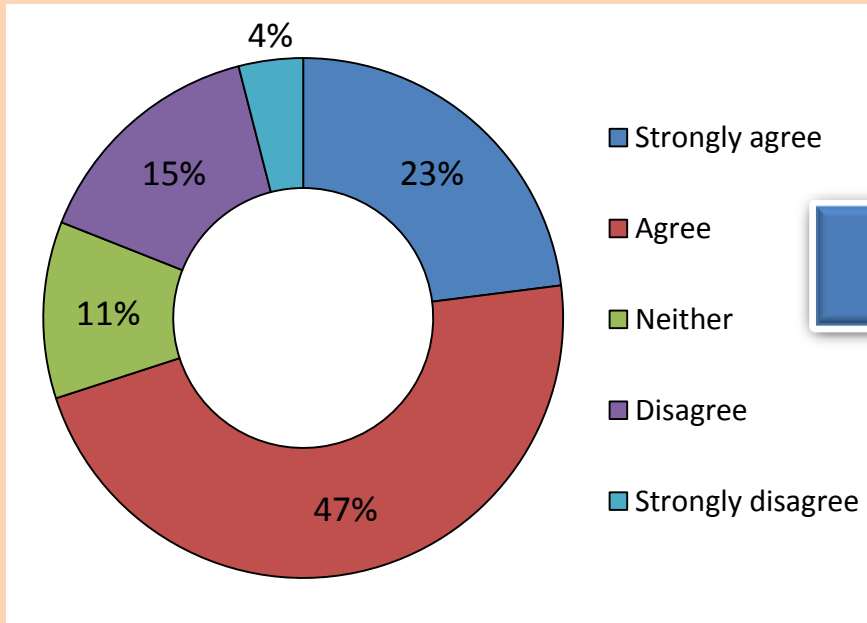
The "Smart" Home Is Here



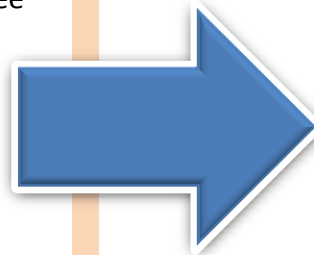
Yale Future Smart Home Security
Complete plug & play digital security solution

Security in the Smart Home

“I would really value the security and safety features a smart home could offer”



Source: Joseph Rowntree Foundation

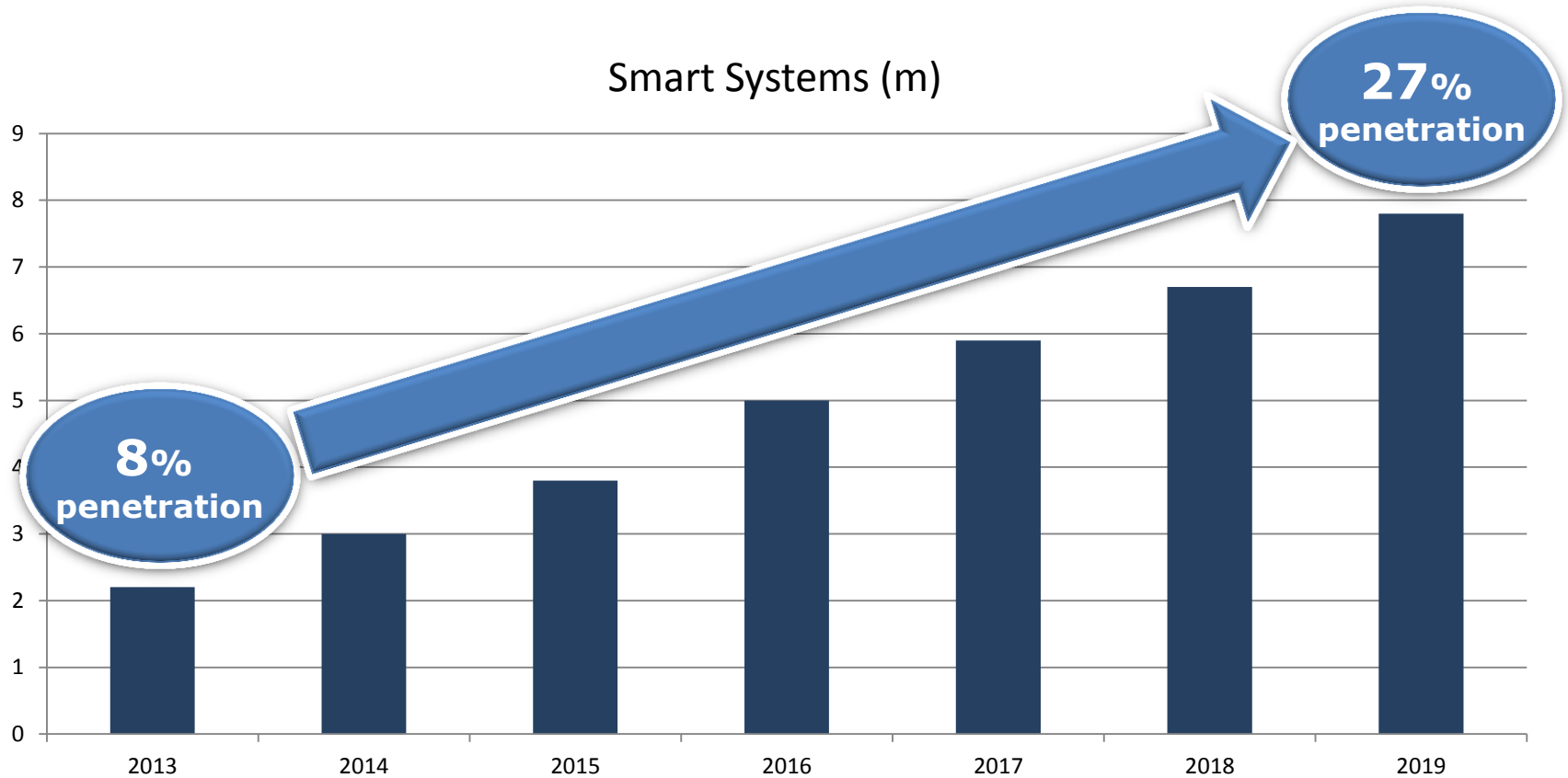


60% of the 7.9m smart homes in the US have connected security systems

25% of consumers expect to purchase a connected security system within 5 yrs

Source: Acquity 2014

Smart Home Penetration - UK



Source: Strategy Analytics 2014

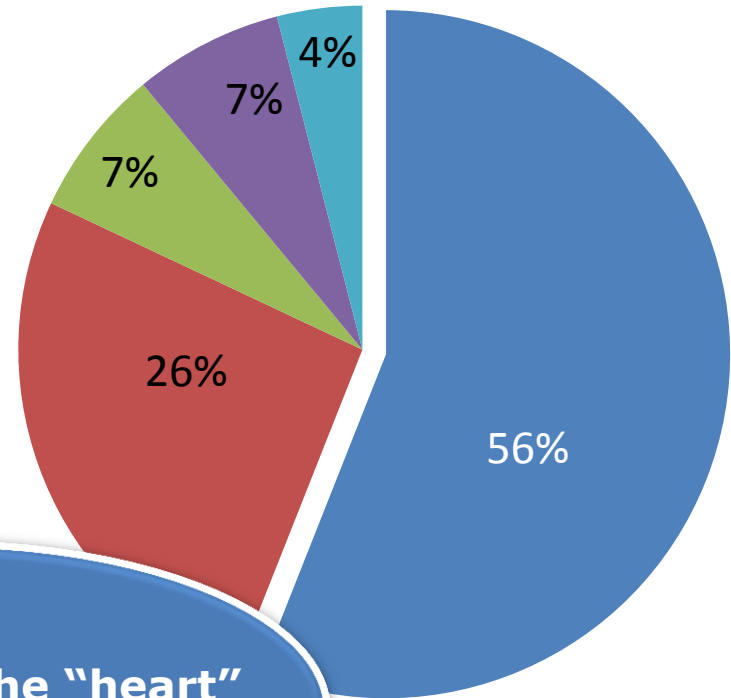
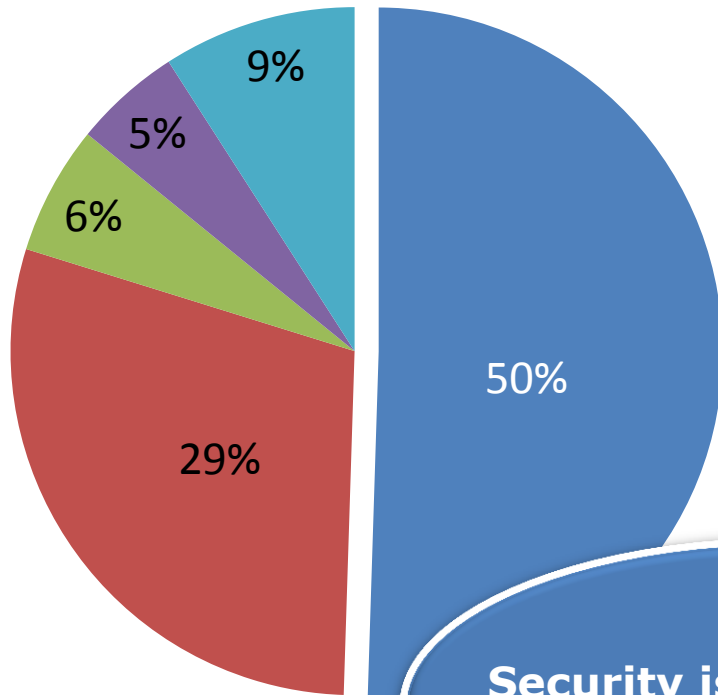
Share of Smart Home Market



Source: EU Samsung product innovation team research 2015

2014

2020



Security is at the "heart" of the Smart Home

- Security
- Lighting
- Entertainment
- Heating, ventilating, air conditioning

Our Market Landscape Will Change

New Competitors

€5 billion
2014

SUN

€26 billion
by 2019

Need to embrace change or miss out

Market Issue

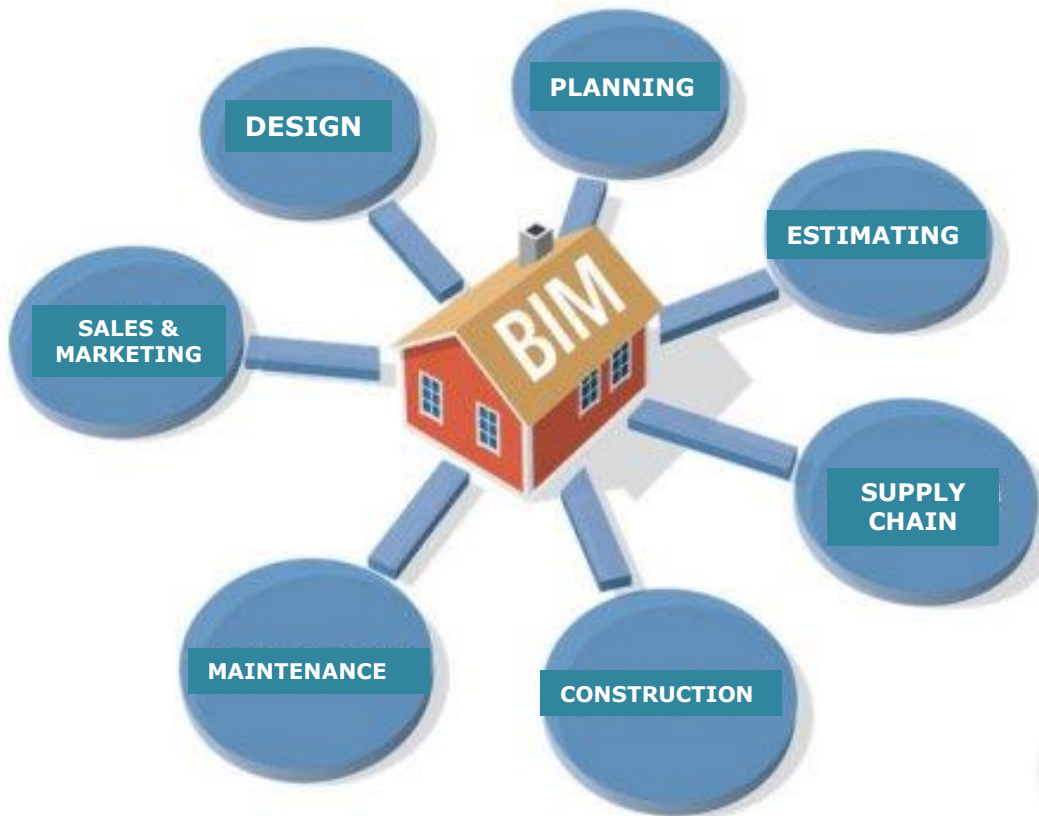
- Growth of the “connected home” will drive demand for “connected” locks
- The residential lock market will step change in terms of technology and value
- New product standard EN16867 yet to be published
- Potential for powerful, global new market entrants
- As market grows potential to pull in low cost, poor quality products
- New routes to market will be created

ARGE Role:

- Work with national associations to develop product standards as technology evolves
- Help address any undue delays to EN16867
- Promote adoption of standards at EU level to counter unregulated low cost competition

BUILDING INFORMATION MODELLING (BIM)

What is Building Information Modelling?



- Data about all the building components and systems
- Shared across all stakeholders
- Maintained across the life of the building

BIM encompasses building whole life...

What are the Benefits of BIM?

**BIM aims to reduce
whole life costs and
time to build**

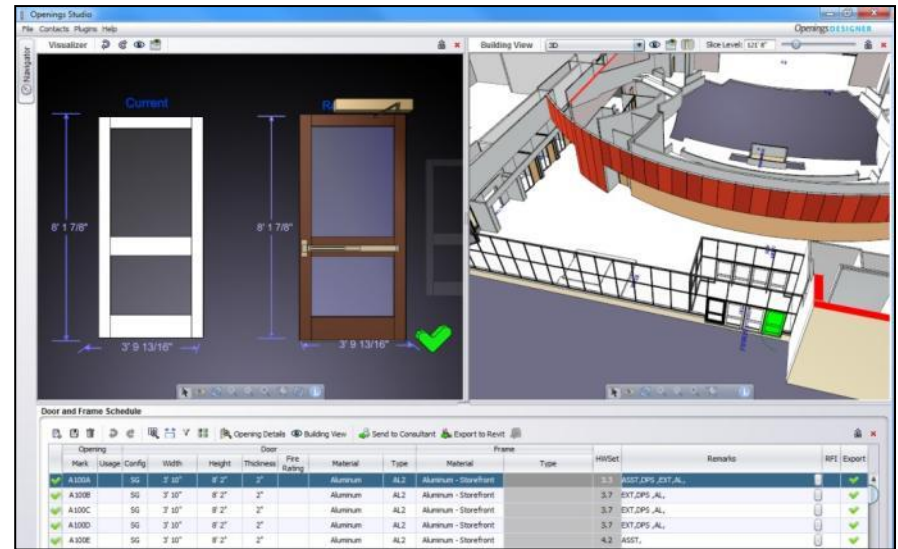
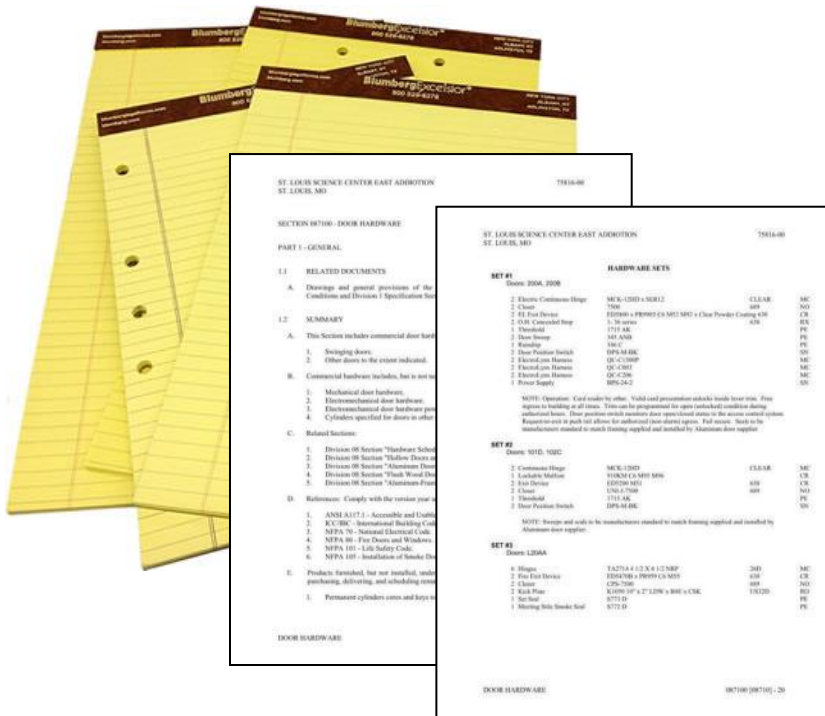
- + Better design
- + Better information and cost estimation
- + Savings in materials and time
- + Better building performance
- + Sustainability

**EPD will measure
sustainability...**

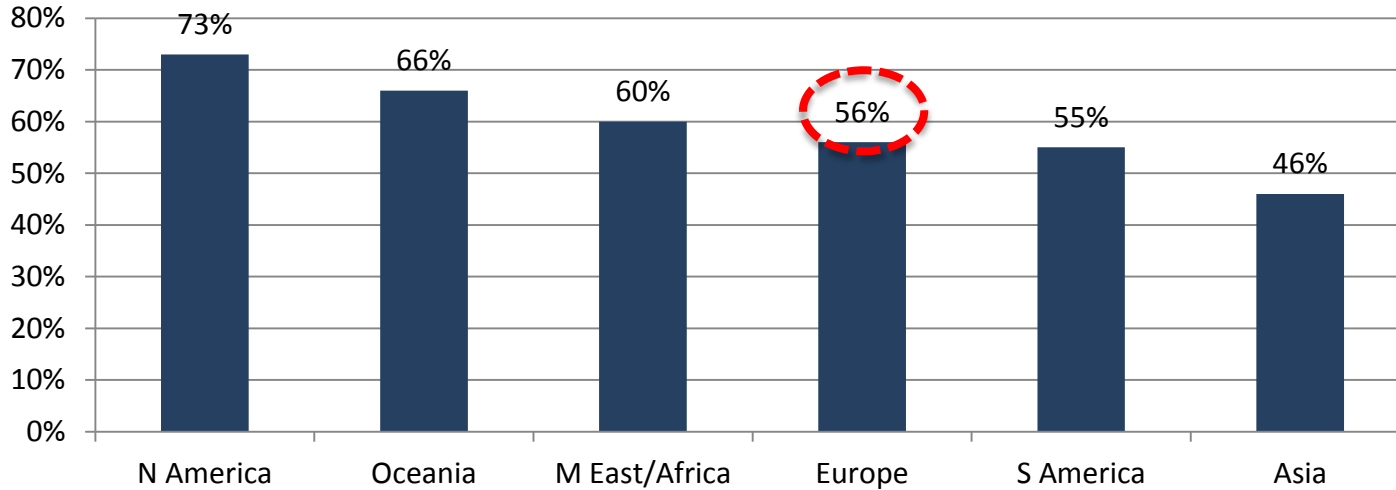
Specification is Changing

BIM technology creates new opportunities

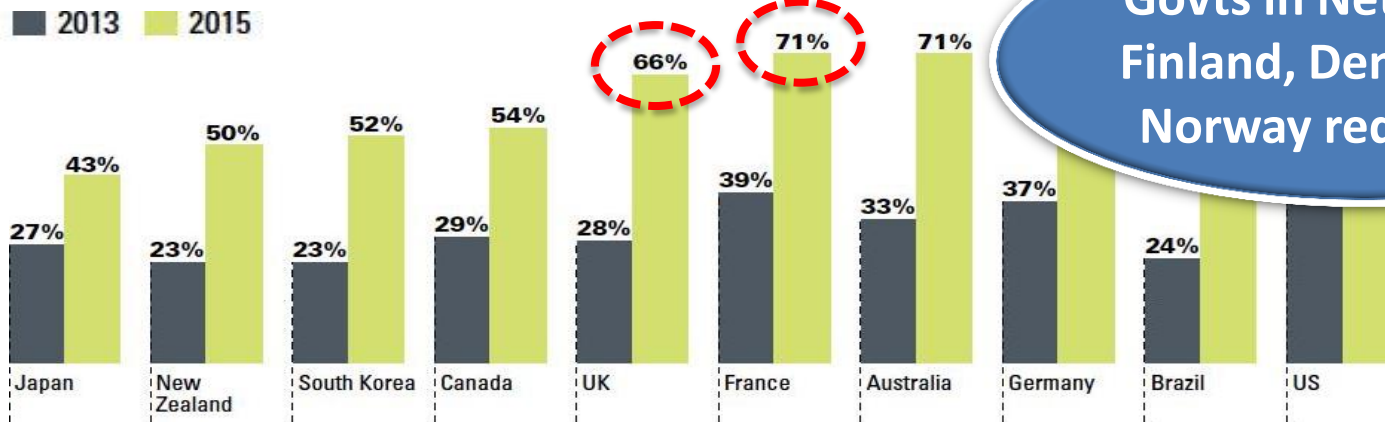
For manufacturers BIM opens new routes to product selection



BIM Adoption Around the World



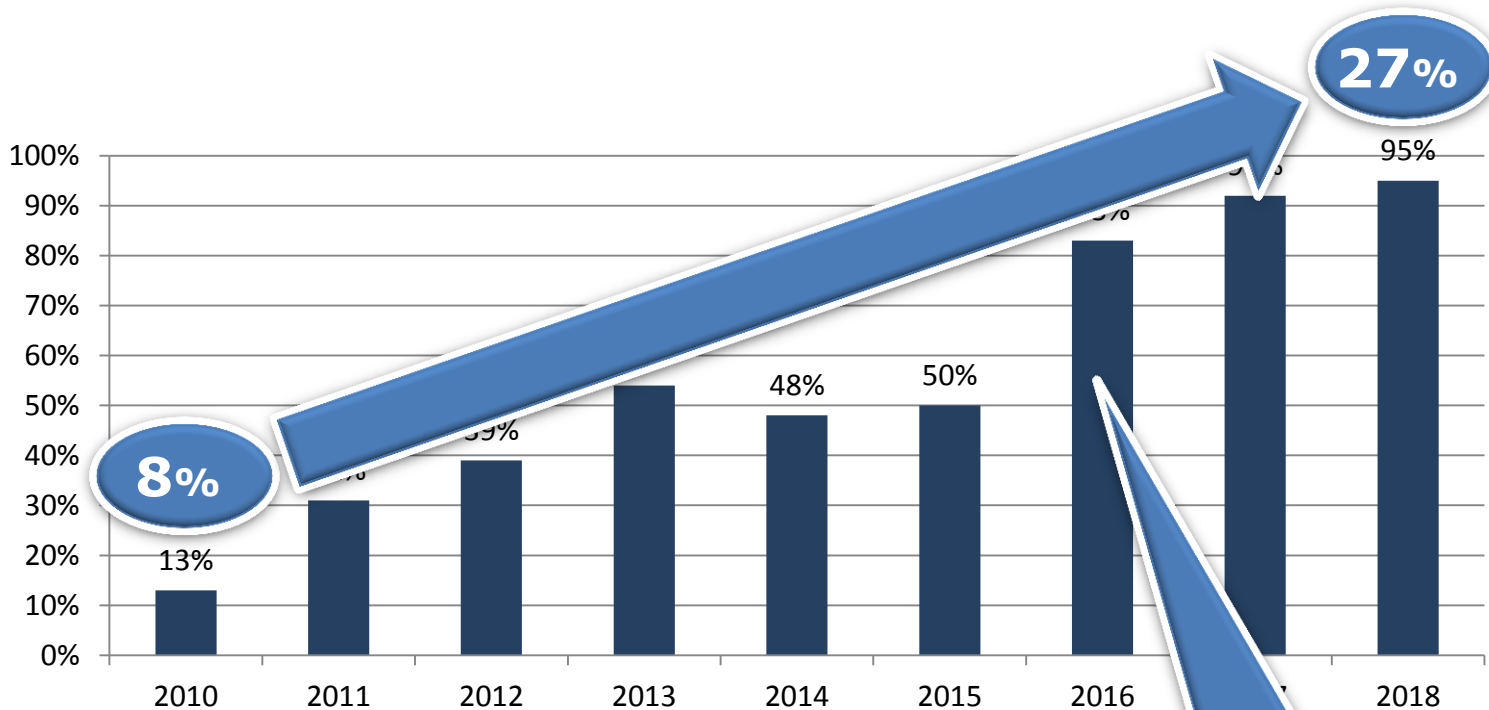
BIM adoption by construction professionals



Govts in Netherlands, Finland, Denmark and Norway require BIM

BIM adoption by contractors

BIM Adoption in the UK



BIM adoption by architects and designers

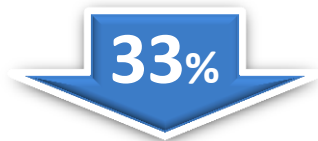
EPD Opportunity

- BIM uses standardised product data
- ie. standardised product LCA data
- **EN 15804 compliant EPD data will be used**

UK Govt mandates use of BIM for centrally funded projects by April 2016

UK Government and BIM

Govt 2025 construction targets*



Reduction in build costs and whole life cost



Reduction in build time



Reduction in **environmental impact** **EPD**



Reduction in trade gap for construction materials

BIM mandated for centrally funded govt projects from 2016

Govt aim is to make the UK a world leader in BIM

...BIM adoption integral to achieving these targets

* UK Government 2025 Construction Strategy

Market Issue

- Sustainability in buildings increasingly required
- Adoption of BIM will increase the demand for product EPD
- European govts increasingly require BIM and EPD for centrally funded projects
- Harmonised product standards will require EPD

ARGE Role:

- Deliver the 14 “generic” EPD to member associations
- Help promote awareness of ARGE EPD at governmental level
- Promote adoption of EPD agenda through TC 350

THE CYLINDER ATTACK THREAT

Lock Cylinders are Inherently Weak

- Picking?
- Bumping?
- Snapping?
- Drilling?
- Key Copies?



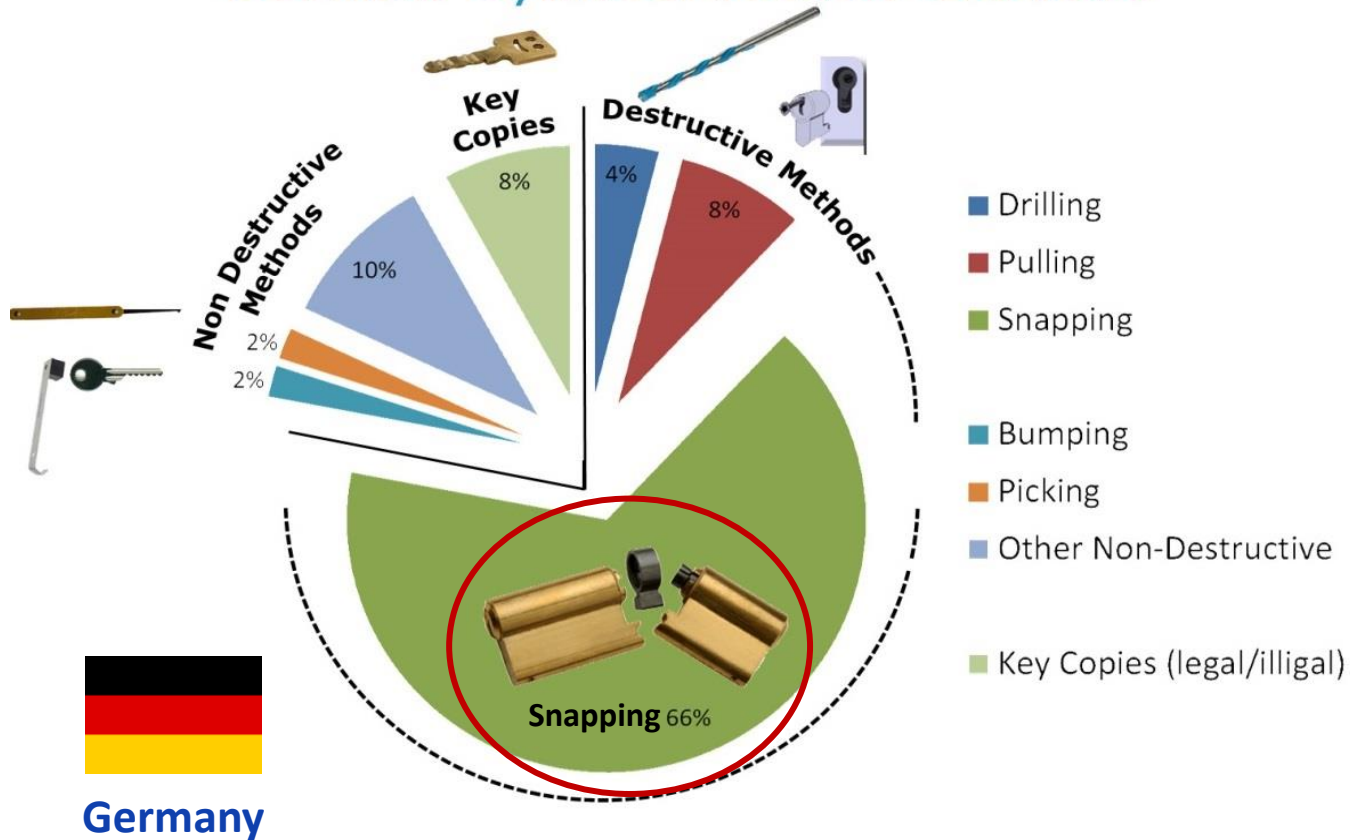
Real security weakness

Perceived security weakness

A growing problem for many EU countries

Cylinder Snapping Happens in Many EU Countries

German Cylinder Attack Statistic



Germany

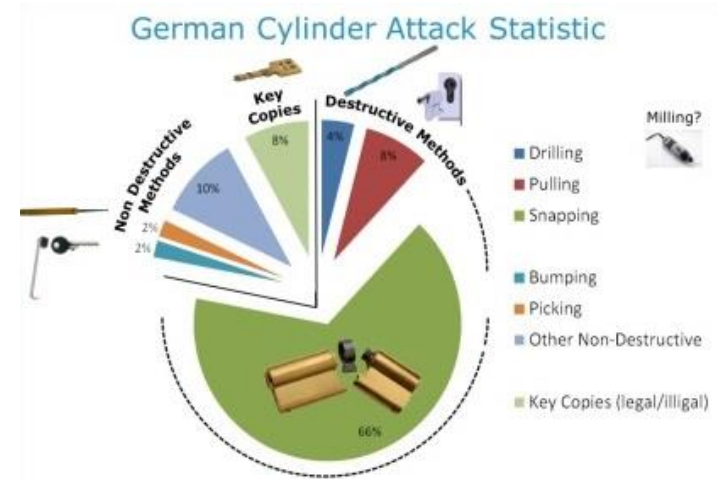


Belgium

Snapping accounts for 70% cylinder attacks

Why is Snapping So Successful?

- **Fast** (than drilling etc.)
- **Silent**
(in comparison to drilling and braking door itself)
- **Cheap** tools
- **Low knowledge/skills** needed
- **Most popular destructive attack method**



National Associations Can Address Snapping



400 crime incidents p/week

No effective standard



We worked with industry...

...and created a national standard



Burglaries in East Leeds

8,900 burglaries

2010

5,700 burglaries

2011

-36%

Massive reduction in snapping



Influencers adopted it



We promoted it!

Market Issue

- Cylinder snapping attacks are increasing throughout Europe
- No European standard exists to address this form of attack

ARGE Role:

- Co-ordinate the development of a “pan-european” anti-snap standard
- Support the standard publication process
- Help promote awareness of snapping at governmental level (and the need for counter-measures)
- Promote adoption of the new anti-snap standard

CONCLUSIONS

There Are 2 Things That We Know.....

Change creates opportunities

Change creates opportunities

ARGE #1 Focus

*"To establish
Association
hardware man
national associati*

...and a strong ARGE
agenda can help access
these opportunities

*de
e sales of
of their*

What Next for ARGE's Agenda?

Develop our sustainability programme?

Electromechanical revolution?

“Smart” home revolution?

New attack methods?

Anything else?

THANK YOU