

Innovation and Standards

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Presentation topics

- Innovation and its central importance to business development
- Why **adoption** of innovations is crucial
- The adoption or diffusion of innovations in markets
- Main reasons for non-adoption
- Importance of standards in adoption
- Collaboration between EI and NSAI



Importance of Innovation

“...Because its purpose is to create a customer, business has two—and only two functions: Marketing and innovation. Marketing and innovation produce results, all the rest are costs.”

Peter Drucker, management consultant and author of “Innovation and Entrepreneurship”



Importance of adoption

- There are many definitions of innovation
- Something new that will be **adopted** by customers – **Michael Schrage**
- Return on investment depends crucially on the extent to which innovations are adopted
- Hence, a development agency sees **adoption** of innovations as an imperative



Main reasons for non-adoption

1. Failure to fully understand customer needs
2. Problems with products
3. Lack of effective marketing effort
4. Higher cost than anticipated



Development of SMEs

- To innovate effectively, SME's need:
 - Structured approach
 - The best customer information
 - Capability to develop products/services at the right cost and without defects
- Learning by doing
- Learning by using
- Learning by interaction



How do standards help?

- NSAI Guide sets out a basic approach to product selection and development
- This is a timely support to the efforts of EI to improve the effectiveness of innovative activity in SMEs
- The guide is not exhaustive and can be revised on the basis of feedback from SMEs



Standards, SMEs and Innovation

- Many SMEs have to meet product standards
- The rigour involved in interpreting and using standards is a significant preparation for the use of key tools of innovation such as QFD or TRIZ
- SMEs can use standards directly to assist the adoption of innovations by designing out defects
- BS 7608 is a good example of this
- Design of welded structures to avoid premature fatigue failure in the market



Combilift C2500

- **C-Series : Standard Mode ICB Series:**
Multi-directional counterbalance
Combilift flagship product

Multi-directional capabilities

Available in LP Gas, Diesel and electric

2500Kgs - 14,000Kg capacities

Lift heights up to 9.5m

Suitable for both indoor and outdoor Use

Extensive range of attachments



More on product development

- All products must be fit for purpose
- Many SMEs do not have the scientific knowledge to design a product that is fit for purpose in all respects
- Standards are essential in such cases
- Directive compliance and the use of EU harmonised standards is very important for SMEs with limited technical capability
- Agreement and innovative building products

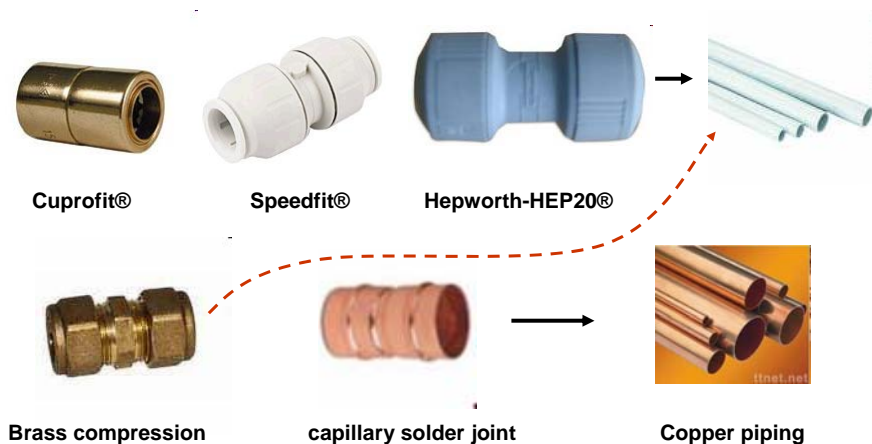


Use of standards to ensure adoption of Central Heating applications

- Central heating, hot and cold water applications were dominated for decades by metallic products
- Innovation saw plastics materials challenge this
- Very different technological basis for fitness for purpose
- Specifying authorities, Architects are pragmatic customers (see next slide)
- For adoption it was necessary to show fitness for purpose by compliance with standards such as DIN 16833 or BS 7291 and several others



The plastics challenge



Qual-PB Polybutylene Plumbing, Central & Underfloor Heating Pipe





Bord Agrément na hÉireann
Irish Agrément Board

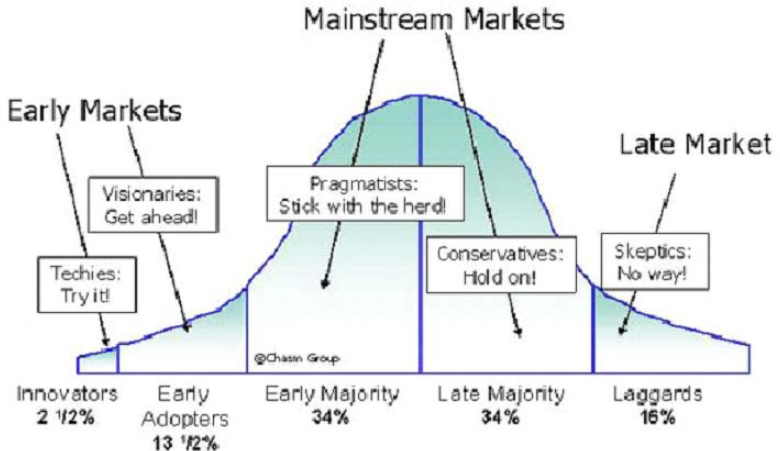
CERTIFICATE No. 06/0249

Quality Plastics Ltd., P.O. Box 29,
Whites Cross, Cork, Ireland

Tel: 021 4884700
Fax: 021 4884701




How innovations are adopted



Segment	Percentage	Characteristics
Innovators	2 1/2%	Techies: Try it!
Early Adopters	13 1/2%	Visionaries: Get ahead!
Early Majority	34%	Pragmatists: Stick with the herd!
Late Majority	34%	Conservatives: Hold on!
Laggards	16%	Skeptics: No way!

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1-- Everett Rogers, *Diffusion of Innovations*, 1965



But there is an adoption CHASM²

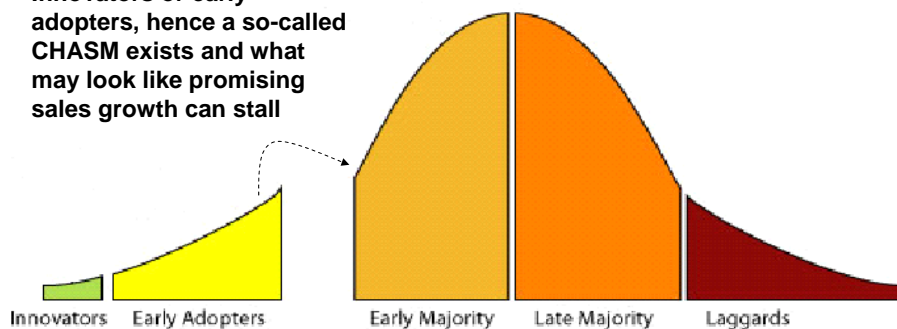


2 -- Capstone Publishing Limited, 1998 ISBN 1-84112-063-4



Crossing the CHASM

Neither EM nor LM customers reference from Innovators or early adopters, hence a so-called CHASM exists and what may look like promising sales growth can stall



Geoffrey A. Moore, HarperCollins Publishers, New York, 1999



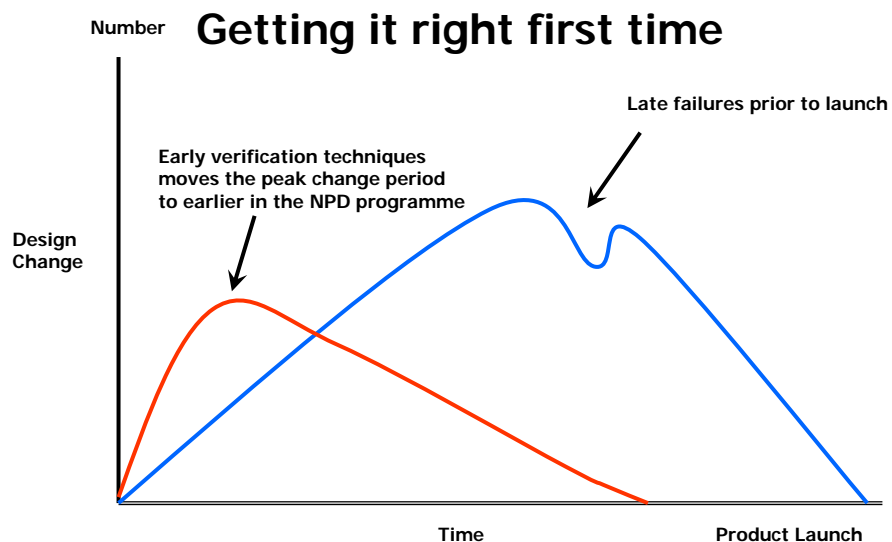
Bar Codes slow to cross the CHASM



From the initial supermarket pilot, it took almost a decade to achieve broad market acceptance

Several factors:

- 1 – Universal Product Code Standard (UPC)
- 2 – Governing Body to assign UPC codes
- 3 – Point of sale system integration
- 4 – Scanner reliability and cost
- 5 – System pricing accuracy



Importance of EM customers

- They represent the most important group
- EM customers are pragmatic. They want **whole** product solutions that work reliably and expect to see **compliance with standards** where possible. A product that is accepted by this segment has a significant chance of success
- LM customers extend the product's life when it is no longer state of the art



Conclusions

- Standards act as a body of knowledge that can suggest solutions across different applications
- They are a significant support for the adoption of innovations
- Their use helps to learn the rigour required to learn and use key tools of innovation
- EI and NSAI are working together to make standards knowledge easily available to SMEs prior to selecting R&D projects.

