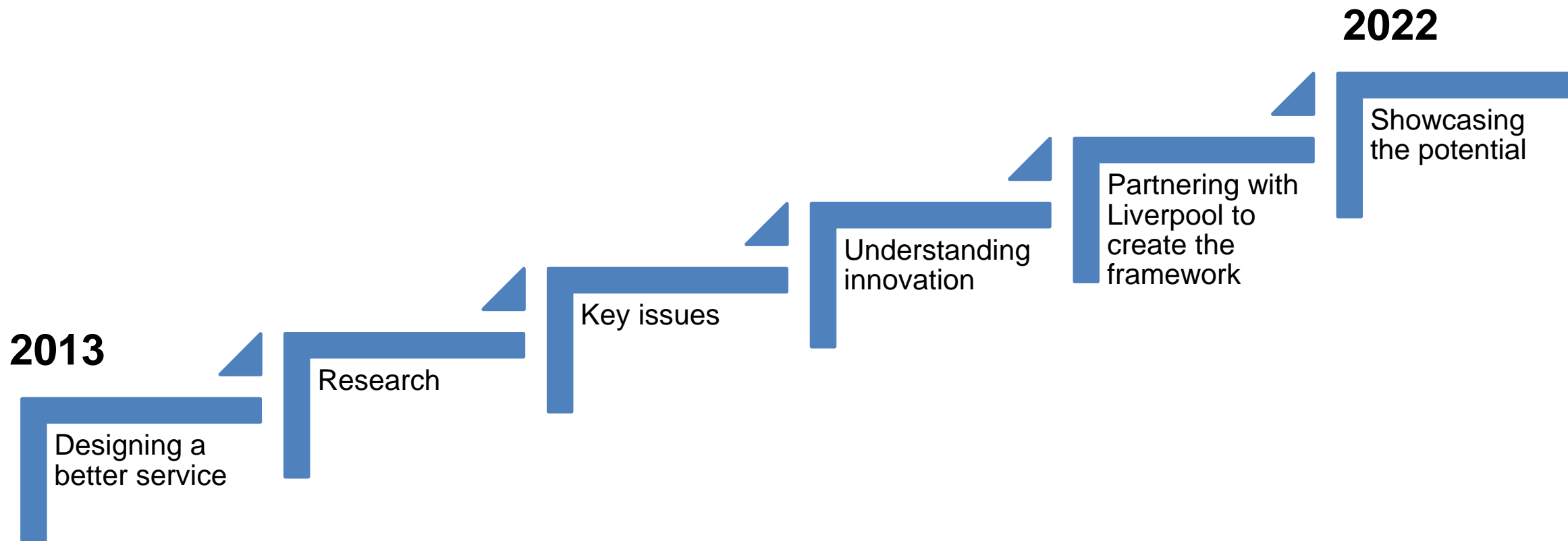




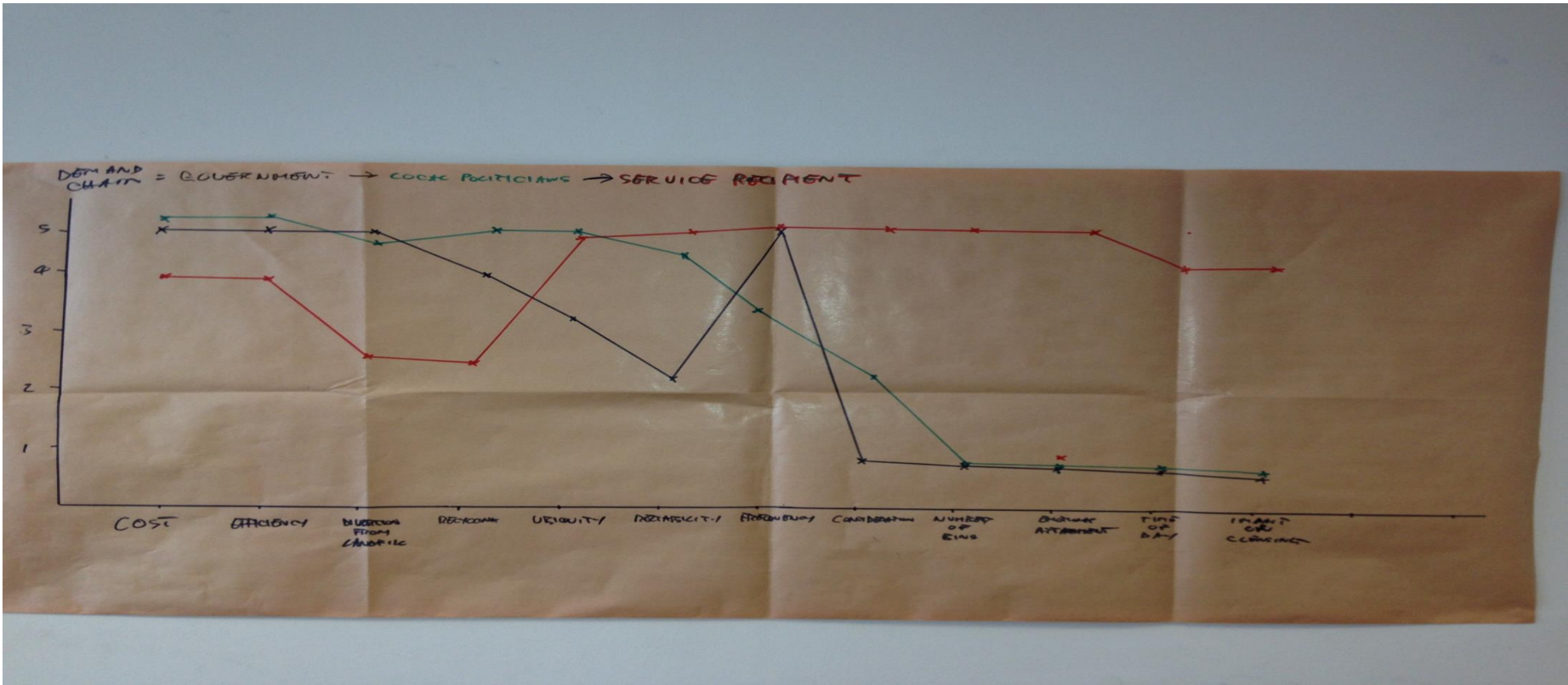
# **The Underground Revolution: Changing Refuse Collection for ever**

Andy Mudd, Head of APSE Solutions

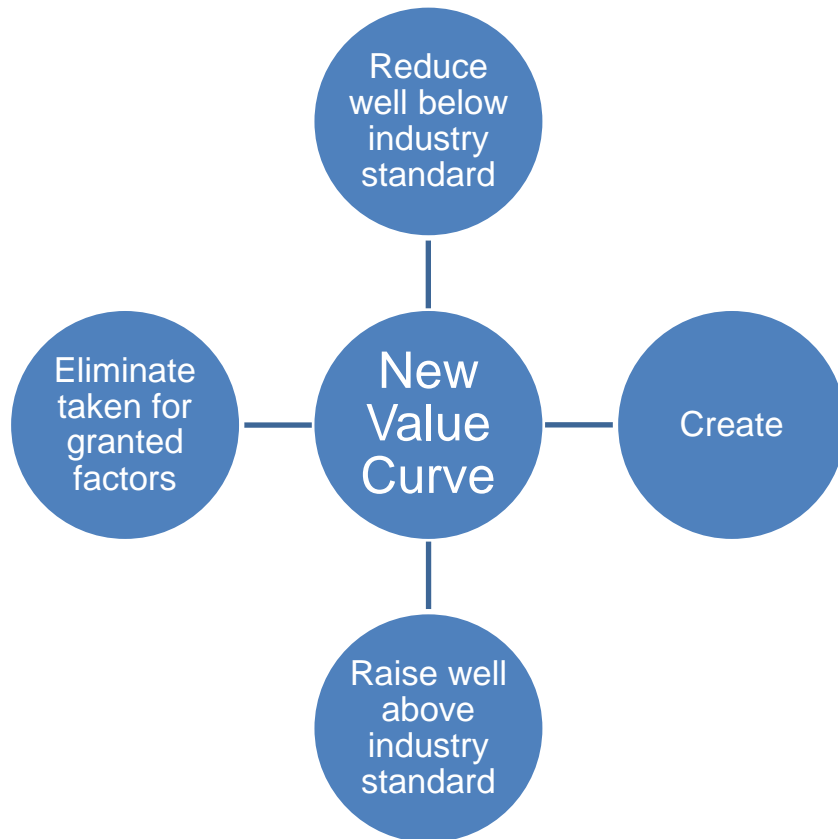
# The journey for us



# Designing a better service



# Blue Ocean Strategy



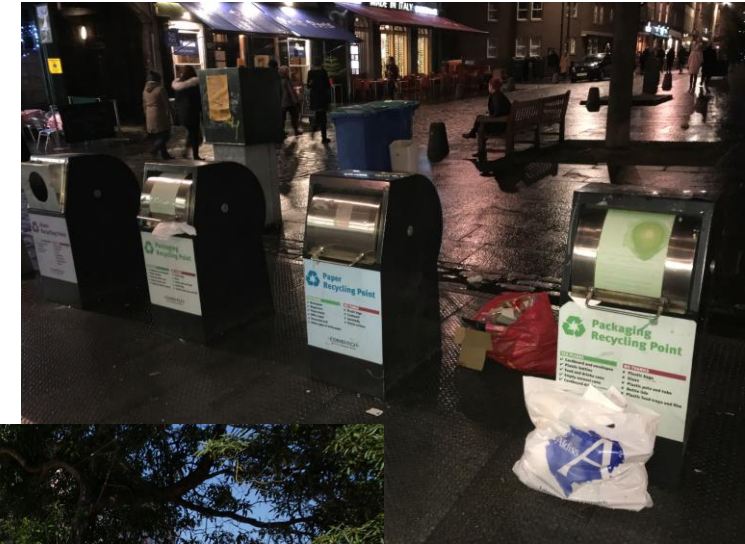
	Head to head competition	Blue Ocean Creation
Industry	Focus on industry rivals	Looks across industry boundaries
Strategic group	Focus on competitive position within strategic group	Looks across strategic groups within industry
Buyer group	Focusses on better serving the buyer group	Redefines the industry buyer group
Scope of product or service offer	Focusses on maximising the value of product within the bounds of its industry	Looks across to complimentary products and service offerings
Functional – emotional orientation	Focusses on improving price performance within existing orientation	Rethinks the functional – emotional orientation of its industry
Time	Focusses on adapting to external trends as they occur	Participates in shaping external trends over time



# The Research Phase



- Netherlands
- Peterborough
- Tower Hamlets
- Edinburgh
- Portugal
- The rest of Europe!
- And further afield still





# Taking on the arguments

- People wont stand for it
  - [“We’re not Spain”!](#)
- It is too expensive
  - [The councillors won’t go for it...](#)
- Recycling rates will drop/contamination will increase
  - [We can’t give people unlimited space for residual waste](#)

# But people won't like it



Well which would you prefer?



# URS ticks the big boxes



- 70% reduction in collection costs
- Half carbon footprint of traditional methods
- Eliminates manual handling
- Very [popular](#)





# URS can drive better behaviour



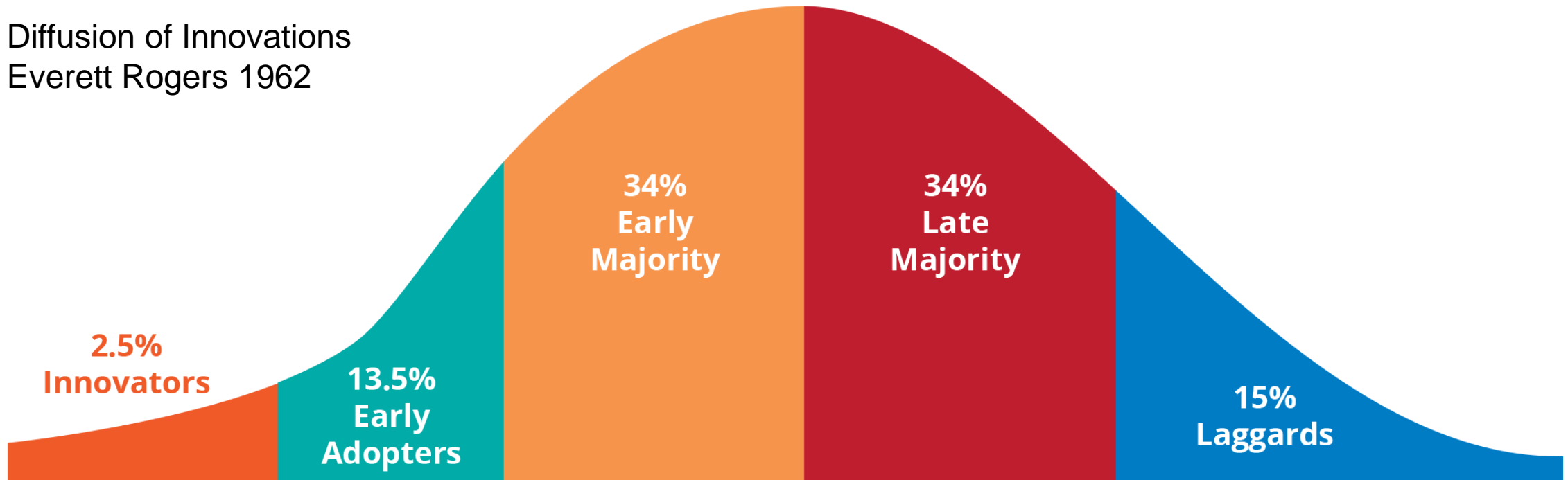
- Access control technology
  - Targeted messages
  - Reward schemes
- Creating an emotional connection
  - Who doesn't want to save the planet?
- Bringing waste disposal into the open
  - Creating peer pressure
- And a huge overall reduction in CO2 cost of recycling
  - No more lifting nearly empty bins!



# Understanding how innovation happens



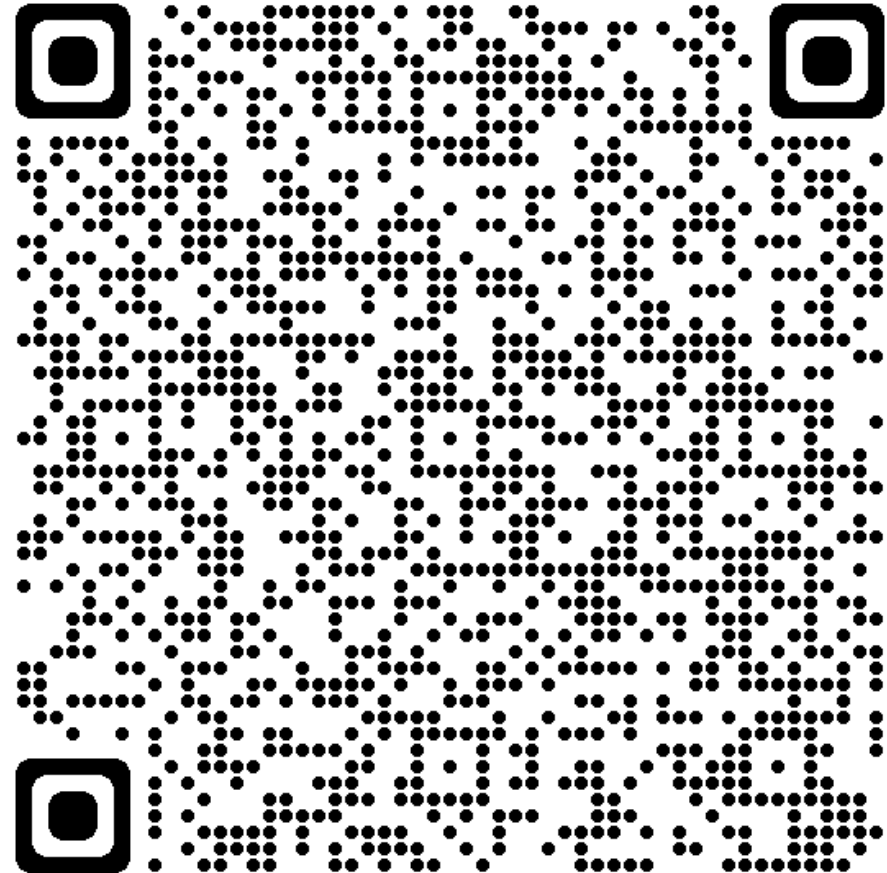
Diffusion of Innovations  
Everett Rogers 1962



# The framework: Making it easy



- Bins
  - Fully Underground
  - Semi underground
  - Above ground
- Technology
  - Access control
  - Monitoring
  - Fill level sensors
  - Weighing
  - Routing
- Vehicles
  - Designed for the job
- Maintenance and cleaning
  - Essential to a long and successful life!



# Communicating the message



- Huge cost reduction
- Much reduced carbon footprint
- Reduction in street litter
- Improved street scape
- Very popular
- Safer for collectors







Better solution for litter



Retrofitting



No brainer for new developments



# A revolution in waste handling

- Dynamic routing
  - Bin sensors and routing technology
- No more emptying empty bins
  - Or unrelenting collection frequencies
- No more missed bins
  - Or disputes with residents
- Positive engagement with people
  - Target the message





# The future?



Less of this And more of this

# Please check out the exhibitors



## Lot One: Bins

Fully Underground  
Semi underground  
Above ground

## Lot Two: Technology

Access control  
Monitoring  
Fill level sensors














Weighing  
Routing

## Lot Three: Vehicles

Designed for the job

## Lot Four: Maintenance and cleaning

Essential to a long and successful life!

 ADI - Suppliers of URS systems. Lots 1 and 4	 Contenur - Suppliers of URS systems. Lots 1 and 4	 ESE - Suppliers of URS. Lots 1 and 4	 FAUN Zoeller - Suppliers of URS vehicles. Lot 3
 Geesinknorba - Suppliers of URS vehicles. Lot 3	 MOBA- Suppliers of URS associated technology. Lot 2	 Molok - Suppliers of URS. Lot 1	 Orwak Easi UK - Suppliers of URS, associated technology, vehicles and maintenance. Lots 1,2,3,4
 REEN - Suppliers URS associated technology. Lot 2	 RSK - Suppliers of URS, associated technology, vehicles and maintenance. Lots 1,2,3,4	 Streetspace - Suppliers of URS systems. Lots 1 and 4	 Villiger - Suppliers of URS, associated technology and vehicles. Lots 1,2 and 3
 Causeway Technologies - Suppliers of URS associated technology. Lot 2			





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