



let's feel good

THE BOOTS JOURNEY

**NATURAL REFRIGERANT FOR FOOD
REFRIGERATION**

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INTRODUCTION - BOOTS


A member of Walgreens Boots Alliance

A health (nutrition) and beauty retailer

WBA: Established in 2014 following merger

Nutrition is a vital revenue stream



A photograph of a person's feet walking on a sandy beach. The person is walking away from the camera, leaving a trail of footprints in the sand. The lighting is warm, suggesting a sunset or sunrise. The text is overlaid on the left side of the image.

*"A journey of a
thousand miles
begins with a
single step"*

OVERVIEW OF BOOTS FOOD REFRIGERATION PORTFOLIO

3,000+ stores

Approx. 800+ with food refrigeration

Combination of Remote DX & Integral systems

All stores based on R404A refrigerant as at 2013. Replacements ongoing

Replacements commenced in 2014 with less GWP refrigerants R407A/F

Hydrocarbon (natural refrigerant) systems from 2015

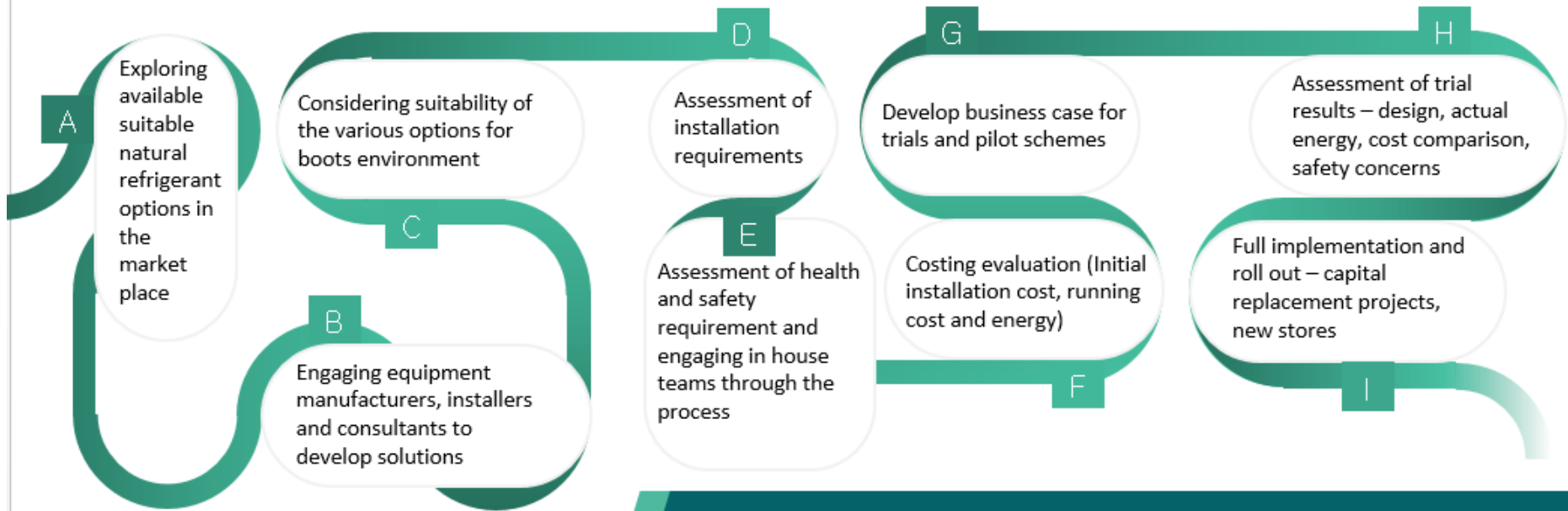
KEY DRIVERS FOR CHANGE

EU F-Gas legislation

CSR commitments

CGF commitments

STRATEGY & APPROACH



Caution required in stepping into unknown territory, hence the need for feasibility trials

IMPLEMENTATION OF TRIAL & PILOT SCHEMES

1

Integral (self-contained) system based on R1270 (propylene)

Trial carried out in 2015. Full implementation and change of specification in 2017

2

Remote DX CO2 system

Pilot scheme developed – implementation plan for 2017/18

3

Remote hydrocarbon chilled water-pumped glycol system – direct cooling

Pilot scheme developed – implementation plan for 2017/18

4

Remote hydrocarbon chilled water-pumped glycol system – R1270 cooling

Pilot scheme developed – implementation plan for 2017/18

CHALLENGES, OPPORTUNITIES & BENEFITS

Future compliance: EU legislation and Montreal protocol

Integral (self-contained systems) cost neutral

Environmentally friendly – reduction in overall carbon footprint for the business

Opportunity for integration with HVAC for additional energy benefits

Growing awareness of technology - mitigating safety concerns

Opportunities for development and innovation amongst manufacturers and installers. Further reduction in capital cost required

Energy efficiency vs. HFC 407A/F remains a challenge for capital investment





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THANK YOU VERY MUCH!