



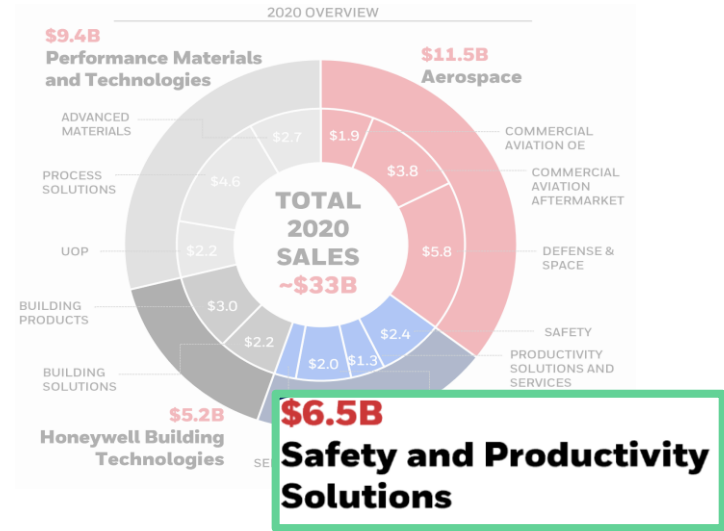
Carnegie Mellon E&TIM

Kyle Siverts, Tianyi Zhu, Jaldhir Trivedi, Savannah Jenkins

Honeywell – Barcode Scanners

- Multinational conglomerate
- Barcode scanners, optics

Key Competitor



Honeywell

Snappiness Procedures

- Develop test procedures to quantify snappiness
 - Standardized, repeatable, and automated
 - Third party

SALES TOOLS AND RESOURCES

CUSTOMER TARGETS / MESSAGING

All Other Verticals Retail, W/D, T/L

New General Purpose DRH Solutions

Customer Targets

- Target any customer who has devices that get frequently shared or touched by multiple people during the day or week
- Any customer or organization that expresses concerns about cleaning products or has new policies for disinfection needs
- Any customer with new cleaning requirements or policies focused on more frequent cleaning

Healthcare Segment

HC Solutions

Customer Targets

- Target healthcare customers, professionals and staff focused on medical and healthcare markets. Profile our existing healthcare product portfolio
- Our HC products are designed specifically for **bedbug** and include features and software to support healthcare applications and workflow

Honeywell DRH Products are Suitable for a Wide Variety of Markets and Applications

SALES ENABLEMENT TOOLS

Internal HCN Tools	Partner Tools	External Tools
Updated Product Datasheets (Mobility, Scan & Print)	Updated Product Datasheets (Mobility, Scan & Print)	Updated Product Datasheets (Mobility, Scan & Print)
Application photography (post launch)	Application photography (post launch)	Customer presentation
Selling guide presentation	Selling guide presentation	DRH Product Page on HoneywellADC.com
DRH General Purpose Product Guide	DRH General Purpose Product Guide	DRH General Purpose Product Guide
Batticard(s)	Batticard(s)	DRH General Purpose Product Guide
Product descriptions	Product descriptions	Top 5 Reasons to Buy
Partner Top 5 Reasons to Sell	Partner Top 5 Reasons to Sell	DRH Blog and Cleaning Instructions on ADC.com
SPS University training modules	SPS University training modules	
DRH SKUs & Pricing in Price Book	DRH SKUs & Pricing in Price Book	
	Dialt Files for New SKUs	



Ethnographic Study

Purpose

- Use cases and snappiness
- Determine realism

Sources

- Honeywell case studies
- Market research reports

Takeaways

- Improve Scanning Speed from Varying Distances



Existing Procedure Design

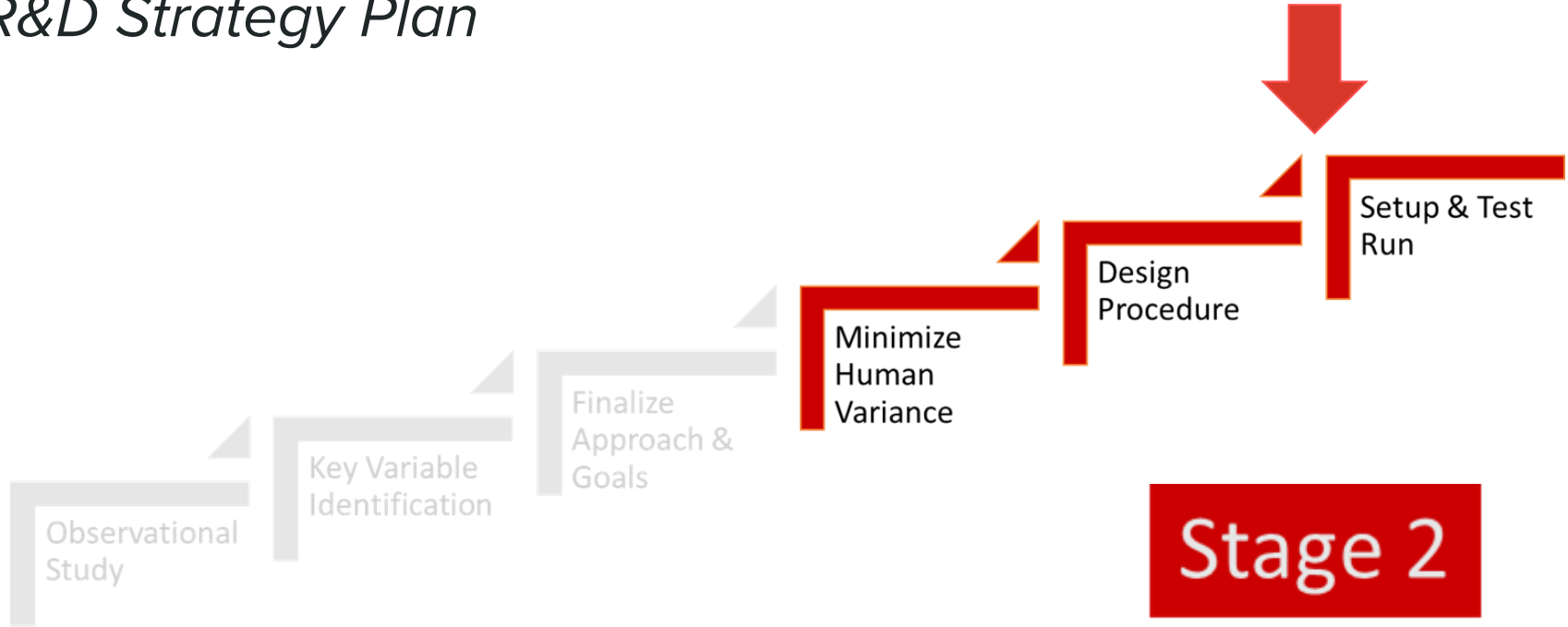
- Obstacle Course
 - Multiple barcodes with varying sizes, skewness etc.
 - Averaging time to finish the course for test subject
- Problems?
 - Non-Repeatable
 - Hence results are non-scientific



R&D Strategy Plan



R&D Strategy Plan

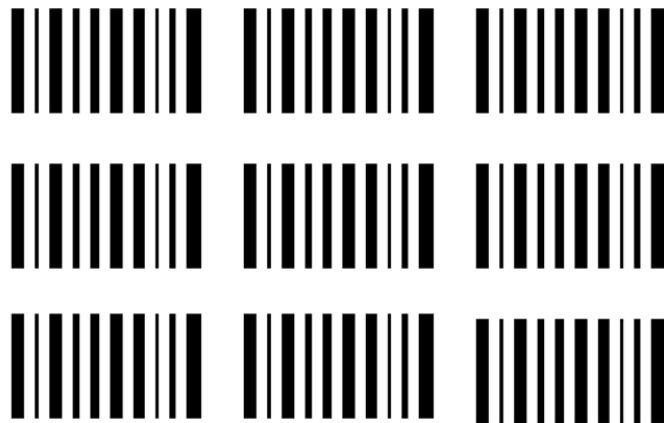


- All Tech used is TRL 9
- Procedure itself requires to be pushed from TRL 5 to TRL 8 in the final step

Procedure Design: Formalizing Snappiness

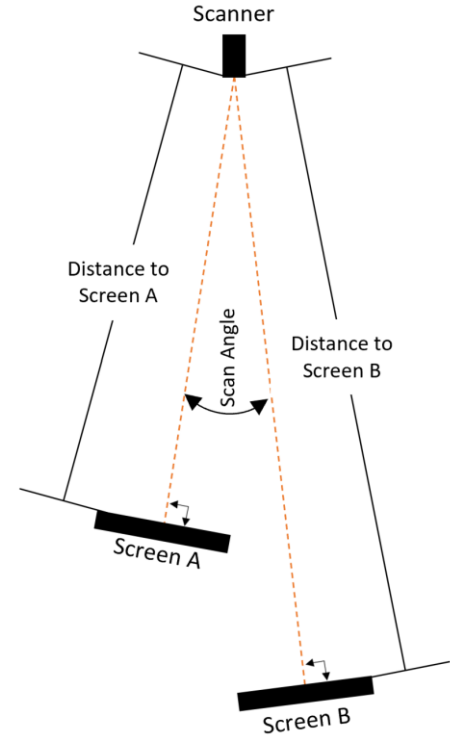
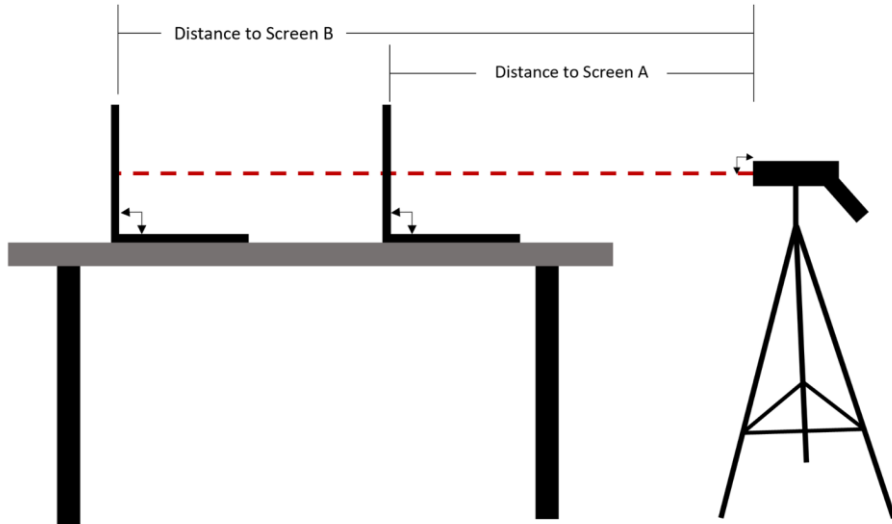
Key Variables / Metrics

1. Flexible Range:
 - Camera Transition delay
2. Easy Inference:
 - Skew Tolerance



Remove Human Intervention to Gain Test Repeatability

- Use Tripods and servos to restrain movements
- Use continuous session for continuous scans



Market Strategy



Incremental
product innovation

Objective test
procedures & results

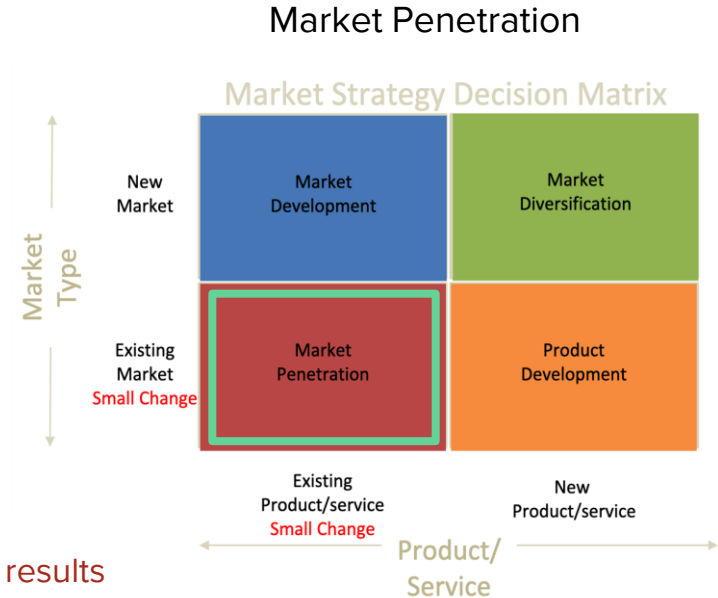
Use procedures &
results as a sales tool
to better infiltrate
existing market



First-To-Market with procedures & results

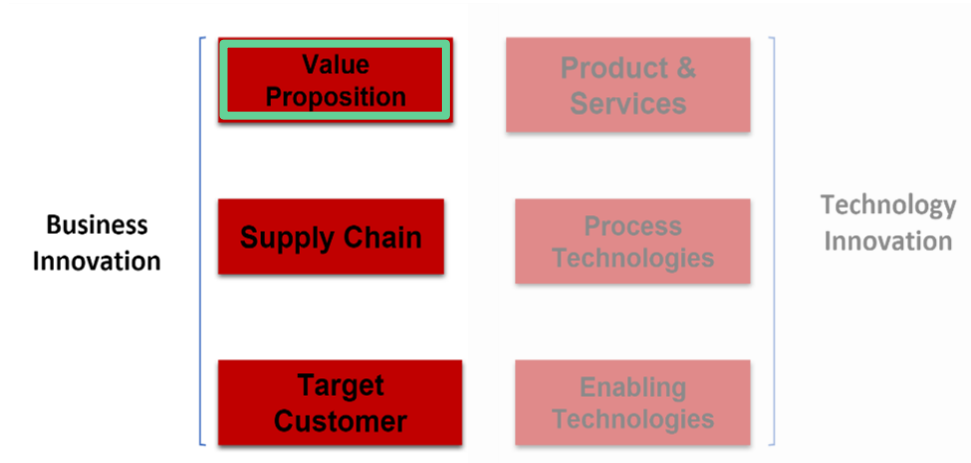
Establish objective product superiority

Become industry's golden standard



Honeywell

Bringing New Value to the Business Model



Business Model Canvas

To differentiate the value proposition:

- *What?* - Activities
 - Ethnography, Sales Approach
- *Who?* - Partnership
 - Continued CMU Partnership
- *How much?* - Cost
 - Implementation Costs vs. Potential Benefits

Feasibility Recommendation

Low Cost



High Impact



Success

Short-Term
3 - 6 months

Mid-Term
6 - 12 months

Long-Term
12 - 24 months

- Implement test procedures
- Collect validation from clients & competitors

- Use the results in marketing
- Observe the clients & competitors response
- Assess if the project is successful

- Improve upon existing procedure
- Work with standards organization
- Make test procedures the industry standard

Honeywell

Questions & Feedback

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