

A black and white photograph of a person wearing a cap and a dark shirt, kneeling outdoors and working on a custom-built electronic device. The device is housed in a toolbox with a 'FIELD READY' logo. The person is adjusting a component on top of the device. The background shows a dry, outdoor environment with some debris.

Abstract

Design

Report



SUPPLYFRAME
DESIGNLAB
HACKADAY PRIZE 2020

Antonio Anaya

Meesha Gupta

Tom Hartley

Part 1:

The Challenge

Challenge -> Research -> Concepts



How might we create solutions to
evaluate and improve product
quality within Field Ready?



*1 Build a culture of documentation,
testing and QA within Field Ready*

*2 Receive user feedback
in new and innovative ways*

*3 Experiment with robust labelling
for a diverse array of products*



Requirements

Simple

to encourage use

Affordable

to ensure adoption

Size-agnostic

suitable for small and large devices

Material-agnostic

for multi-material usage

Language-free

or multi-language

Fast

not increase manufacturing time

Inspection

for verification of products



Goals



Coherent product documentation



Consistent product validation



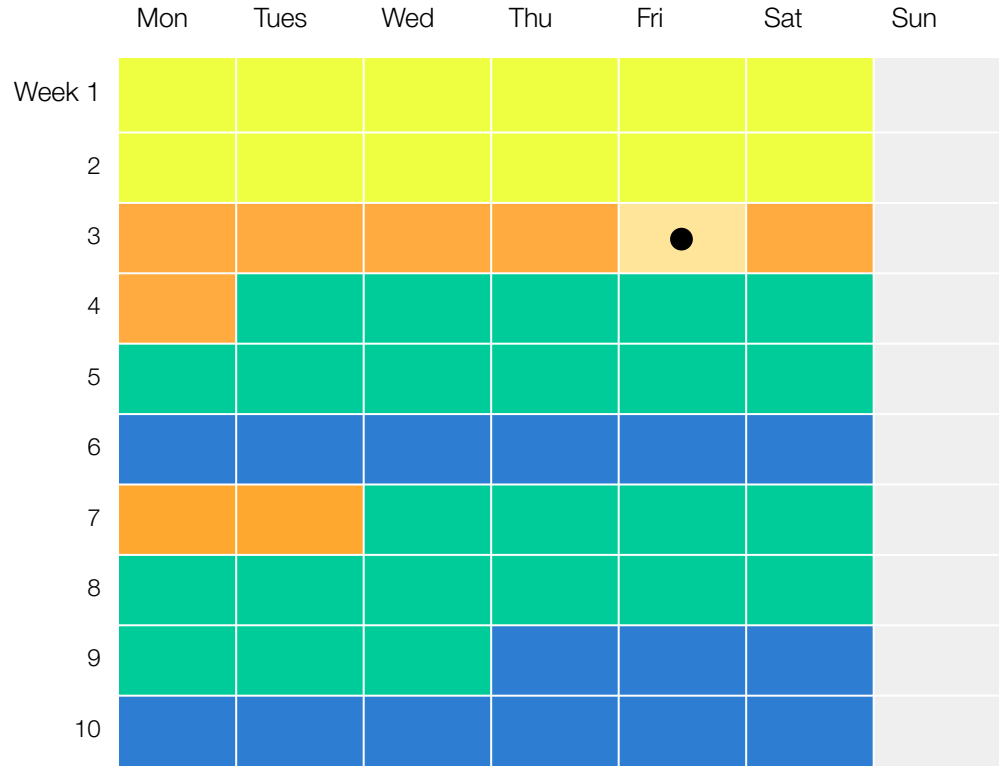
User-centered information and interfaces



Culture of testing and risk-assessment to ensure consumer protection



Project Timeline



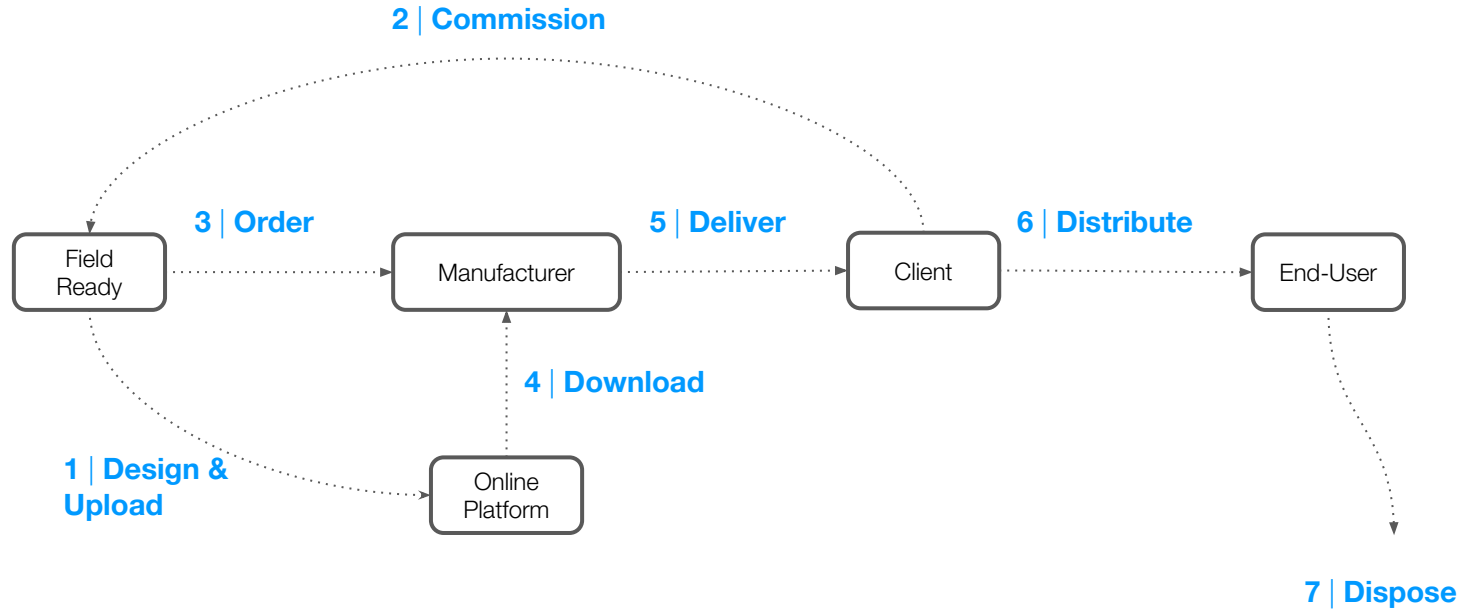
Part 2:

Our Research

Challenge -> **Research** -> Concepts



Order Flowchart



Stakeholders



Field Ready's engineer on rapid response duty

Models available and
documentation framework.

Partner NGO or Client

Watch results of investment.



Population in need or end-user



Get a valuable, easy-to-use, assistive
product and continuous
improvement.



Users long term

Urban makerspace/Fablab
engineers

Concise and extended documentation,
tools to get feedback from users



Local traditional
manufacturer

Concise documentation,
designed information for context,
effective manufacturing process.



Field Ready Employee Survey



Section 1 of 5

Field Ready Survey



Hi there! We're Meesha, Antonio and Tom, and we're exploring the creation of a new labelling, tracking and quality control system within Field Ready, and we're looking to understand Field Ready's work better. Your responses will allow us to gain a broader picture of the processes and workflows within Field Ready, and feed these forward into our solution. We'll start with some general questions, and then ask about three different products you have recently manufactured. Thank you!

What's your name?

Short-answer text

What geographic region or country are you working in (e.g. Pacific)?

Short-answer text

Once a product has been shipped to the end users, how do you gather feedback regarding product quality and customer requirements?



ISO Standards

TECHNICAL
SPECIFICATION

PD ISO/TS 9002:2016
**ISO/TS
9002**

First edition
2016-11-01

**Quality management systems —
Guidelines for the application of
ISO 9001:2015**

*Systèmes de management de la qualité — Lignes directrices pour
l'application de l'ISO 9001:2015*



Reference number
ISO/TS 9002:2016(E)

© ISO 2016

BSI Standards Publication

BS EN ISO 9001:2015

Quality management systems
Requirements



bsi.

...making excellence a habit.™

INTERNATIONAL
STANDARD

BS ISO 28219:2017
**ISO
28219**

Second edition
2017-09

**Packaging — Labelling and direct
product marking with linear bar code
and two-dimensional symbols**

*Emballage — Étiquetage et marquage direct sur le produit avec un
code à barres et des symboles bidimensionnels*



Reference number
ISO 28219:2017(E)

© ISO 2017



Part 3:

Our Concepts

Challenge -> Research -> **Concepts**



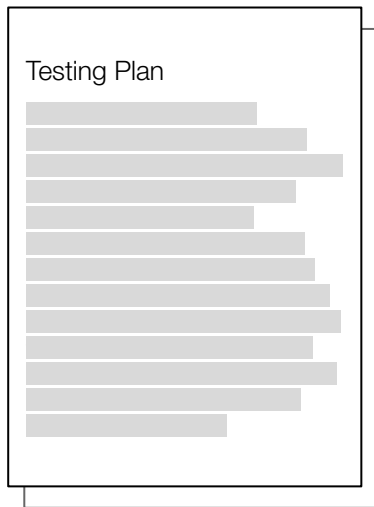
*1 Build a culture of documentation,
testing and QA within Field Ready*

*2 Receive user feedback
in new and innovative ways*

*3 Experiment with robust labelling
for a diverse array of products*



1 *Build a culture of documentation and testing*



Visual test plans

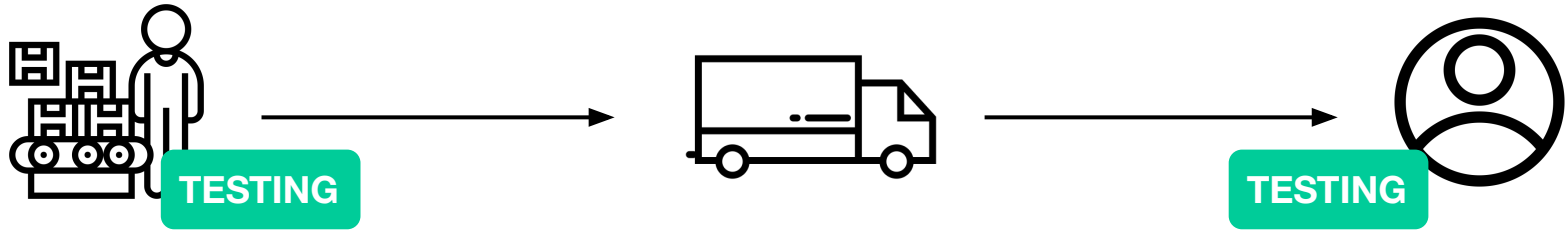
Interactive testing

Testing metadata

Rethinking the *design* of testing to increase usability



1 Build a culture of documentation and testing



If testing is simple, reliable and fast...

Can we rethink *where* testing is done to build trust in decentralised manufacturing?



1 *Build a culture of documentation and testing*

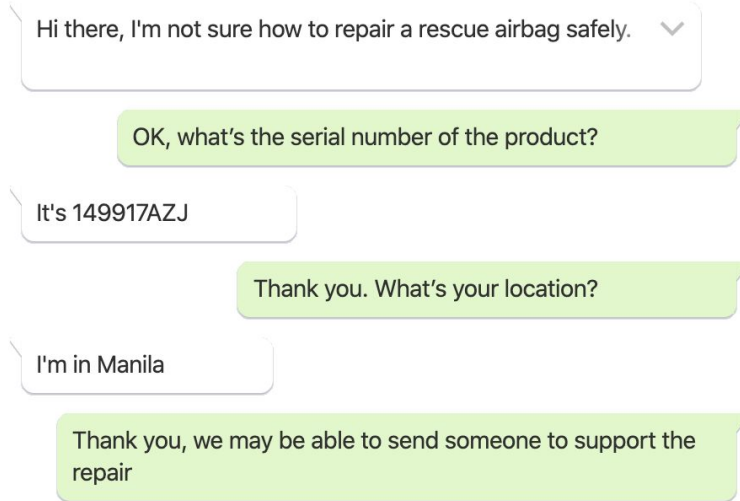


When a user receives a product today, they subconsciously check it for defects - scratches, cracks or missing parts.

What if Field Ready could become an authoritative source of simple tests to do on their products to ensure that users could formalise this existing process?



2 Receive user feedback

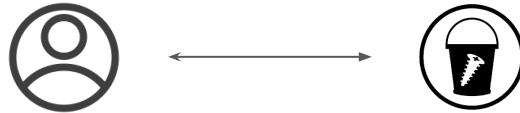


Low volume of messages:

Human replies

Medium to high volume:

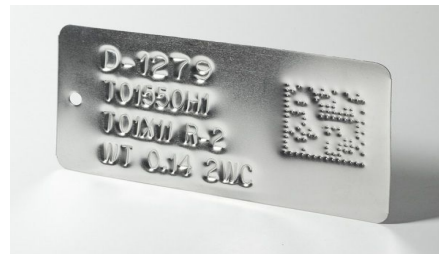
Human replies fused with automated dialogue



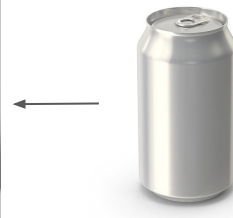
3 Experiment with robust labelling



short-term



long-term





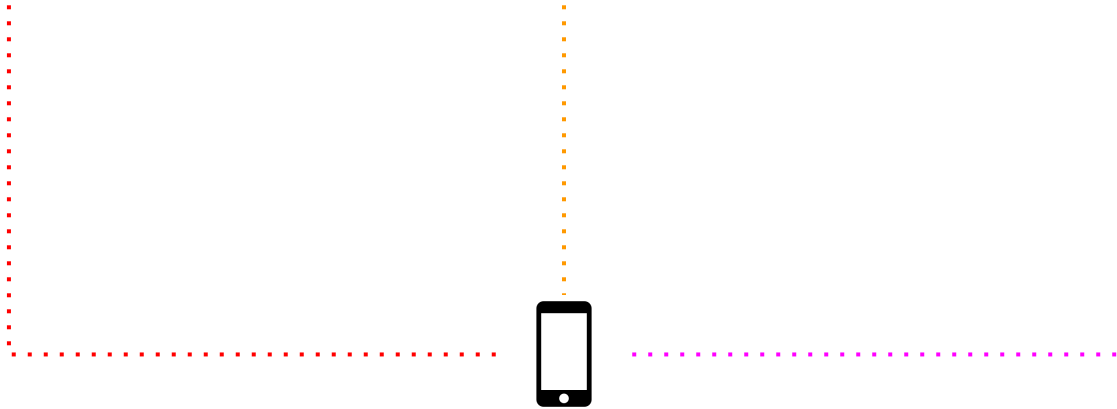
Documentation



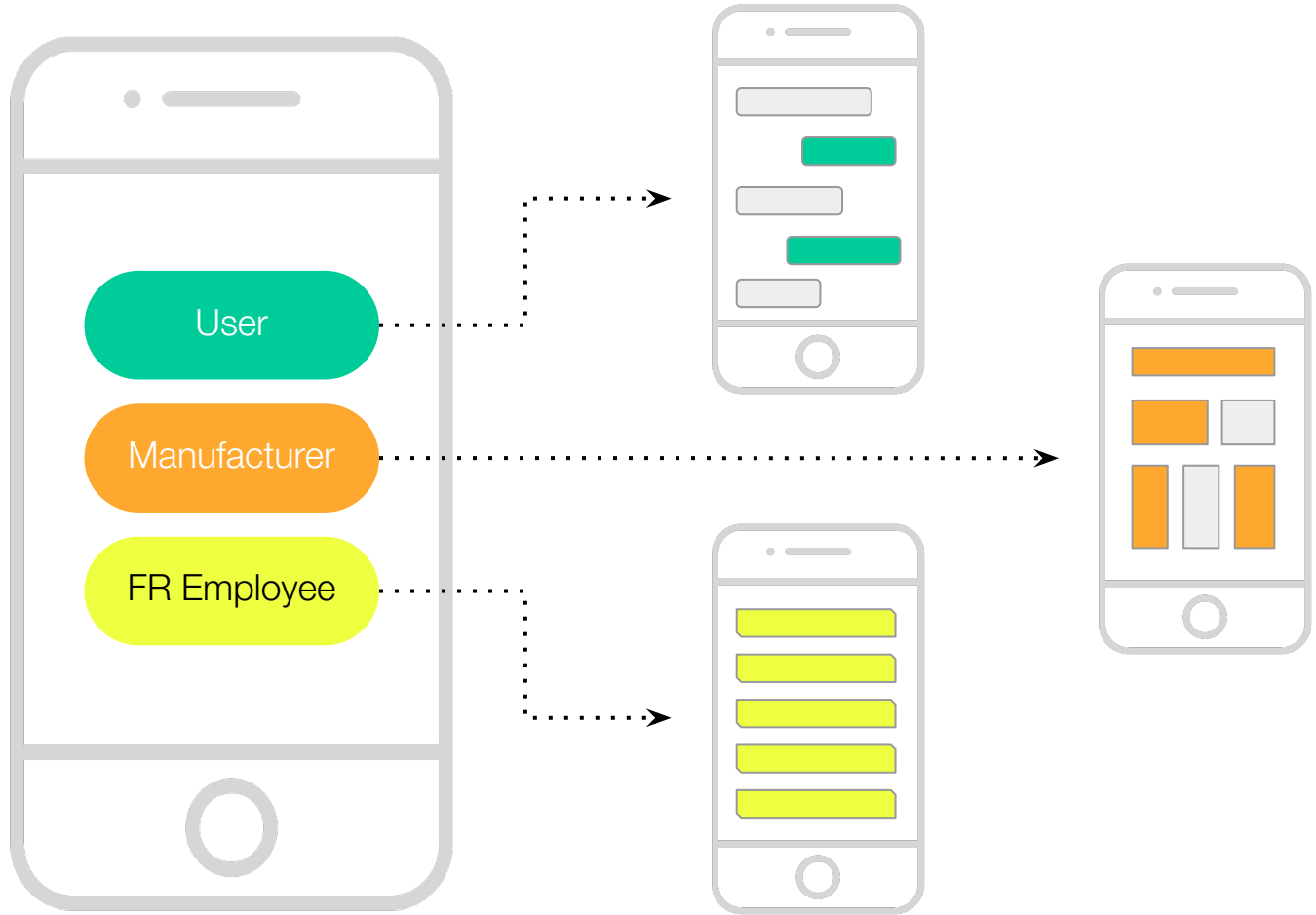
User Feedback

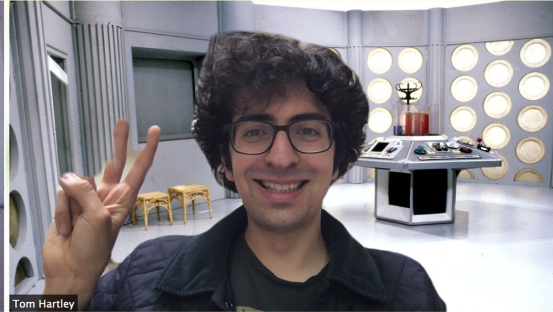


Tracking



Different interfaces for different stakeholders





FIELD READY



**SUPPLYFRAME
DESIGNLAB
HACKADAY PRIZE 2020**

Stakeholders

