

RCT4MANU:

Testing an innovative support scheme for manufacturing SMEs

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RCT4MANU - Background

Innosup-06 Project, funded by EISMEA
Start: September 2019 - August 2022
Partners: Innovate UK and Innovate U KTN

RCT4MANU Objectives:

1. Increase confidence of using RCTs in and innovation context, and capture and build the knowledge and experience gained into the design of future innovation support programmes.
 2. Use RCTs to deliver enhanced understanding of the impact of the 4Manufacturing® support scheme to recipient SMEs, and the critical design criteria for realising scheme scale-up.
- Prioritising an enabling digital project - Shortening innovation-decision time
 - Supporting consistency and scope of business support
 - Capturing standardised data for future programme design

Get involved!

- 4Manufacturing® Training
- Pilots: RCTs and / or 4Manufacturing®
- Events: Lessons learned, share best practice, continue discussions

AIM: Network of Innovation Agencies across Europe

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4Manufacturing® tools and resources

4Manufacturing Training Workshop 01

Facilitator All changes saved!

Share

Attainment levels:

Level	Description
0	Starting from nothing
0.5	Have made the decision to adopt
1.0	Have commenced implementation and seen initial results
2.0	Have confirmed adoption decision and correct and expanding use
3.0	Have multiple sites of the solution in the business
4.0	Have fully realised the promise to industry 4.0 within an organisation

1) Connectivity - RFD/Blockchain
Current Score: 3.0
Aspirational Score: 4.0

2) Robotics & AI
Current Score: 3.0
Aspirational Score: 4.0

Action Plan to reach that aspiration

Wrap up: Expected Impacts
Time, People, Planet & Profit



4Manufacturing®

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1 Organisation 2 Contact details 3 Challenges 4 Themes 5 Enablers



Overall approach

- **Plan:** Simple comparison of treated and control groups. Statistics to be sorted out later.
- **Lesson:** RCTs are to test a hypothesis – which needs to be articulated – and this fits poorly with innovation and experimentation. Statistical tests depend on preconditions – parametric tests require normality, which in our case was absent.
- **Recommendation:** *Do a pilot study first. Plan baseline analysis before starting.*

Defining outcome variables

- **Plan:** Measure number of manufacturing-related technology investments/adoptions made in the past 12 months and planned within the next 12 months.
- **Lesson:** Analysed past and future adoptions separately to avoid uncertainty and optimism bias of ‘future adoptions’ dates in the baseline survey. Some participants also listed ‘past’ technologies with a future implementation date suggesting that ‘investment/adoption’ was not defined sufficiently.
- **Recommendation:** *Make outcome measures definitive and unambiguous.*

Recruitment

- **Plan:** 3166 people contacted across 1800 businesses from a list of companies that had already contacted KTN and IUK for support in the past. With this, we aimed for an uptake of 420 SMEs and 350 to retain until the end of the trial.
- **Lesson:** We had to expand our recruitment to companies from the Beauhurst Business Database (<https://www.beauhurst.com>), those who receive KTN's Manufacturing newsletter, those on KTN's twitter account and via LinkedIn. In total we received 91 responses for our baseline survey.
- **Recommendation:** *Run pilot to identify the expected response to invite ratio.*

Contact Approach

- **Plan:** We recruited SMEs via a series of three emails and conducted a split test to select the best email subject lines to garner responses.
- **Lesson:** Our first mailshot resulted in 20 sign-ups, the second reminder e-mail resulted in 20 more and the third reminder, in an additional 10, but sending these three emails also caused 75 companies to unsubscribe from KTN communications.
- **Recommendation:** *Be aware of the limitations of emails and consider other approaches (telephone, social media)*

Minimising delays

- **Lesson:** Recruitment happened between Nov 2020 and Dec 2020, workshops were not delivered until Feb 2021-April 2021 due to, among other things, the length of the randomization process, the need for ethics clearance at the University of Portsmouth and the Christmas break. In this time 18 SMEs dropped out of the trial.
- **Recommendation:** *Where possible, minimise the time between sign-up and intervention.*

Survey responses

- **Plan:** We expected to retain approximately 80% of responses from baseline to endline.
- **Lesson:** So far we have received responses from 21 of 50 from the treatment group (42%) and 12 out of 41 from the control group (29.27%), suggesting the promise of a workshop in the future was not enough of an incentive.
- **Recommendation:** *Incentivise submitting responses or schedule a time for participants to complete the surveys at sign-up, to mediate the gap between intentions and behaviour (Sniehotta et al., 2005).*

Thank you

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