



Internet of Production Alliance

People & Skills Initiative

Developing a Maker Passport System

Sarah Hutton

Research and Community
Engagement Lead
Internet of Production Alliance

September 26, 2023 at 16UTC

on ZOOM

Register here:

<https://shorturl.at/zP017>



MAKE



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 101016858.





Agenda

- Welcome / IoP Alliance Updates
- People & Skills Specification and the Maker Passport - updates
- Use Case: mAkE Project
- Use Case: Innovative Manufacturing Awards
- Wrap-Up/Close

Today's Speakers and Affiliates



Gertrude Goh
Project Manager;
Researcher; Women in
TVET & STEM; Personal
Growth & Capacity
Building Enthusiast
IMA Programme



Stephane Fadanka
Molecular Biologist,
Executive Director at
Mboalab Biotech
mAKE Project



Thomas Mboa
Researcher in
Responsible AI at
CEIMIA | Project Focus
Areas: State of AI in
Africa, Data trust
mAKE Project



Sarah Hutton
R&D/Engagement Lead:
IoP Alliance; Research
Fellow: School of Public
Policy, UMass Amherst
PSS R&D Lead; IMA
Mentoring Program
Lead



Jessica Nguema
Project Lead:
mAKE, IMA, IoP Alliance



Andrew Lamb
Council Chair:
IoP Alliance

Community Notes

<https://shorturl.at/iotx8>





IoP Alliance Community Updates

Recent changes, upcoming programming, and events

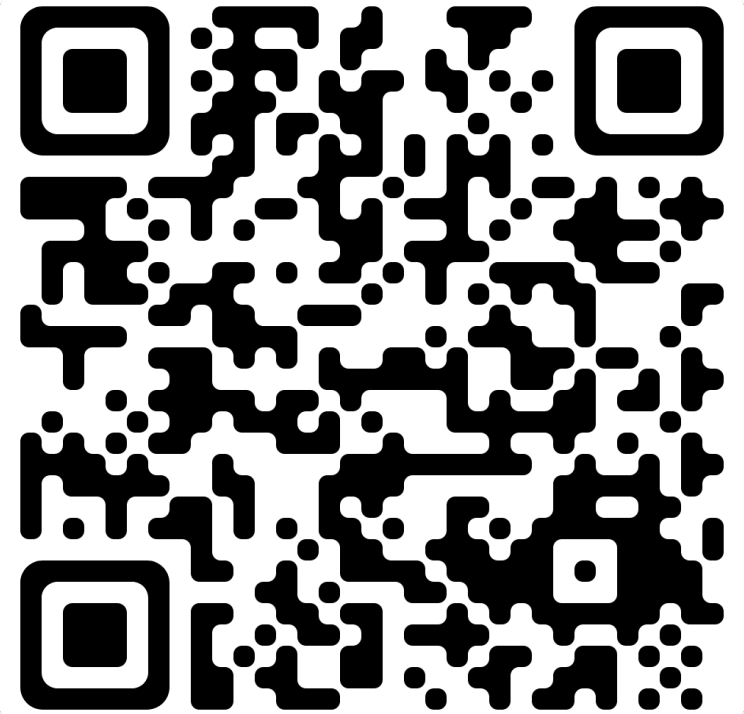
Updates on the IoP Alliance

- Open Know Where Data Awards – wrapping data collection; presentations from award recipients in November Community Call. Community forum: <https://community.internetofproduction.org/c/okw/13>
- Open Know-How – determining the initiative's work and combining efforts with GOSH on connecting OSH directories. Notes from the latest meeting: <https://community.internetofproduction.org/t/okh-initiative-group-meeting-23-09-21/562>
- Code for Science and Society Digital Incubator Program Wrap-Up on Governance (recording forthcoming): <https://www.codeforsociety.org/news/announcing-incubator-cohort>
- Upcoming online events

Sustainability of Networks

SEP 27, 1:00PM UTC

REGISTRATION:



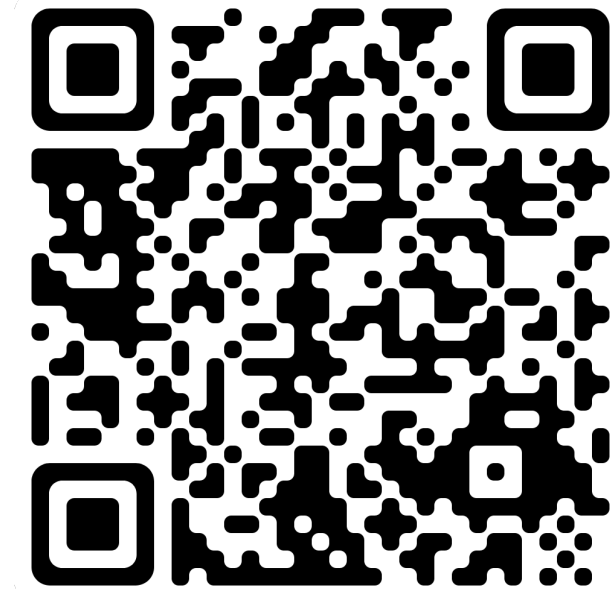
October Community Call

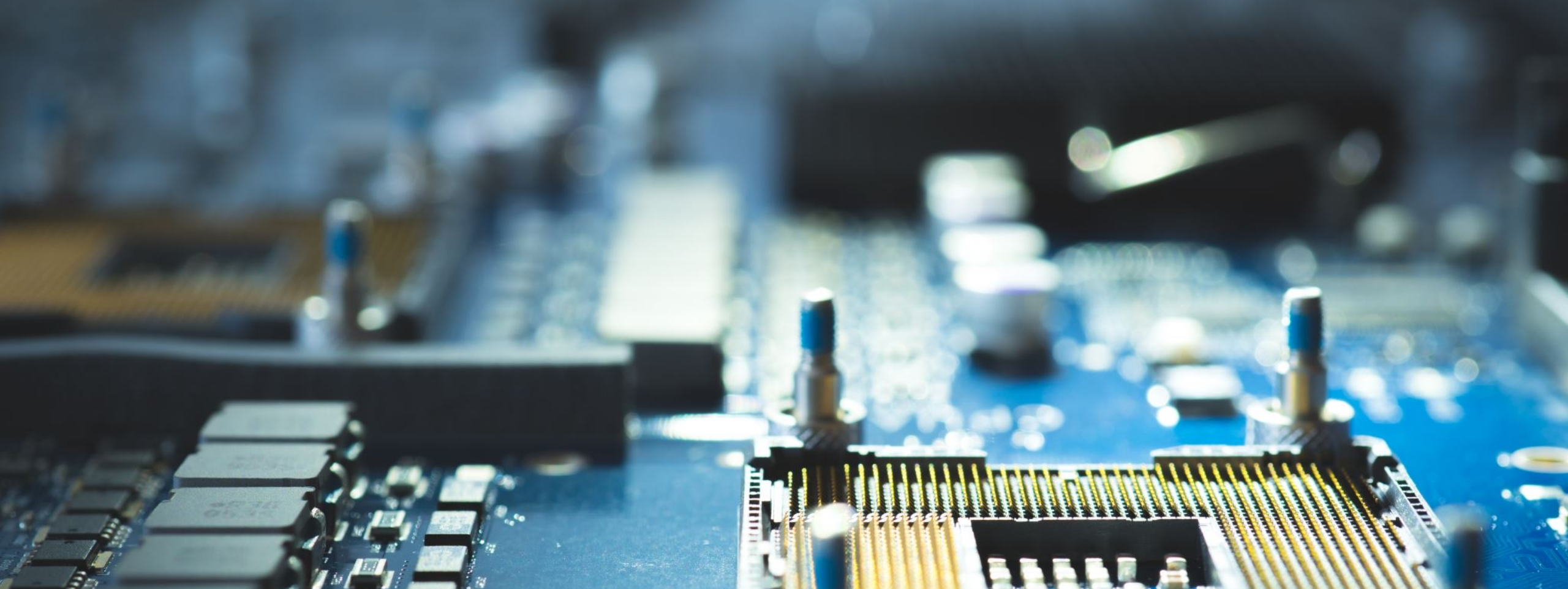
OCT 31, 1:00PM UTC



BUSINESS MODELS CATALOG WITH
ANNA SERA LOWE

REGISTRATION:





People and Skills

Overview of the project, process, outputs, and assessment

People and Skills Standard: Overview



- IOPA vision: the **central goal** of this work is to create a shared understanding of the explicit, implicit, tacit, and procedural knowledge necessary for individual makers to participate in and easily navigate a distributed manufacturing ecosystem.

- Funding support
Sloan



Problem We're Trying to Solve for: Makers, Designers, Engineers, Artists (Target Audience)



WHY: Why create a maker passport?
What is the purpose, benefit[s], and utility of a passport?



WHO: Who is the maker, as identified by affiliation, and which affiliations may indicate transferable/verifiable skills?



WHAT: What do makers need to prove as part of the digital passport?
What qualifiers are needed to indicate skills and experience?



HOW: How are skills, experience, and identity verified?
What authentication and credential verification processes.

MAKER PASSPORT PROJECT

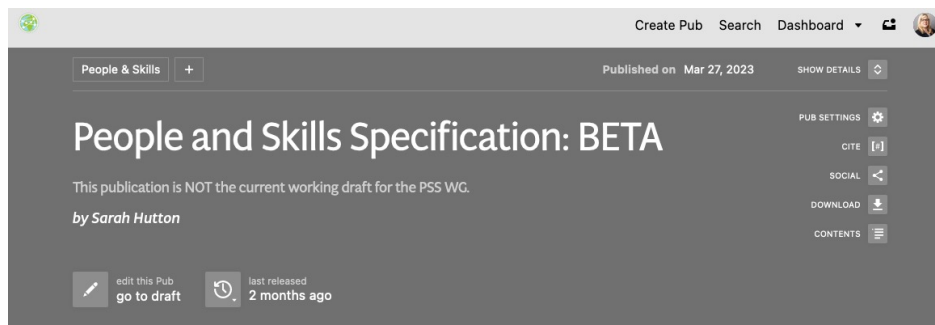
TRAJECTORY: PEOPLE AND SKILLS

Developing mutual recognition of hardware DIH users' skills using make passports [mAkE D4.1 WP4]



Target Date: 30 June 2023

Spec Released June 30; Currently v4



The Internet of Production Alliance People and Skills Specification (PSS) BETA Release

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Contents

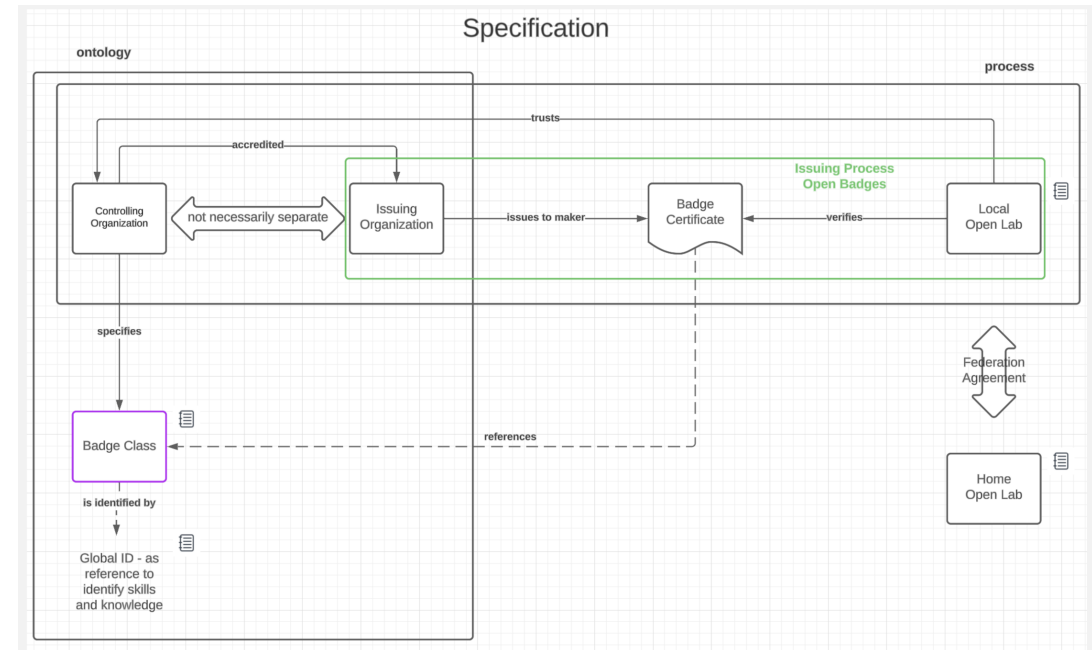
Sarah Hutton

1. [Introduction](#): provides a broad overview of the background, scope and aim of this standard.
2. [Scope](#): provides information on the specification audience, application, and overarching authorisation workflow.
3. [Jargon Buster](#): provides definitions to key terms used through the specification document.
4. [Specification for People and Skills Mutual Recognition](#): provides the metadata schema for PSS, including fieldname(s), purpose, rules, and examples.
5. [Governance of this Specification](#): provides guidance on how the PSS will be developed and maintained.
6. [References](#): List of citations for resources used during development of the PSS beta release.

- Community members invited for feedback
- Working group established; fall meeting schedule forthcoming
- Prototype forms developed using Google; JSON (for web display)

Preliminary Discussions: PSS WG

- Identification of authorizing organizations/issuers
- Identification method for assigned badge class
- Storage of generated user records and badges (conceptually)



A transdisciplinary team from Europe and Africa

Networks coordinated from
Cameroon, Germany,
Ghana, Denmark, Spain,
South Africa, Austria





Policy innovation & network building

Co-creating governance strategies for the establishment and development of regional hub networks



Case studies on Hub Alliances



Joint policy agenda



Explore African cities joining the Fab City Network



Technical Innovation

Creating open standards and management tools for makers and maker spaces enabling them to form a distributed manufacturing network



Maker Passport



Map of Machinery



Contracting system



MAKE



Business model and venture building

Company builder programme allowing access for high potential impact innovation startups to mentors that develop sustainable business models and targeted matchmaking services



Venture Building



Business Model Catalogue



Exploring new funding structures



Capacity and skill building

Creating open educational resources and a share online learning environmental and training for hubs and makers



Co-created toolkit



Trainings in maker spaces



MOOC

Where the People and Skills Standards Integrates with mAkE



WP1

Business Models

Document and Disseminate
an Open Catalogue of Business
Models



WP4

Data Standard & Maker Passport

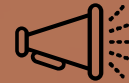
SKILLS – Mutual Recognition
Standard and collection of
Maker Passports.



WP4

Map of Machinery

Online map of machinery based
on the OKW standard



WP4

Digital Contracting System

Based on a model contract

mAkE: African European Maker Innovation Ecosystem: Thomas Mboa



Funded by the Horizon 2020
Framework Programme of the
European Union

Tools for identifying people and skills (2022-2024)

A Specification for Skills will be developed, which will form the prototype of a Maker Passport.

[Specification for Skills](#)

Map of Machines (2022-2023)

500 makerspaces and local manufacturers across Africa and Europe will be added to the IOP global map of machines.

[Add your machines](#)

Tools for Distributed Contracting (2023-2024)

A report on the requirements for distributed contracting will be published, a template for a distributed contract will be tested and a digital distributed system will be prototyped.

Open Catalogue of Business Models

Open Catalogue of Business Models is planned to be published in fall 2023.

Webinars on Business Models

A webinar series to present business models for makerspaces and makers.

[View Youtube playlist](#)



Innovative Manufacturing Awards: Gertrude Goh



Research capacity for impact tracking

A data management plan and a report on makerspaces impact indicators have been published to help the cohort to collect data with support of experts mentors.

[Measuring Makerspaces Impacts](#)

Open catalogue of business models

An open catalogue of business models for makerspaces developed based on research and interviews. A website will be develop to publish and guide adoption.

[Open catalogue of Business Models](#)

Innovation - Distributed Production trials

1,125 items with 3 levels of complexity to be produced across the 9 participating makerspaces and to be donated to local healthcare facilities, following by a report on distributed manufacturing.

[Follow the trials](#)

Map of Machinery based on the Open Know-Where standard

The 9 makerspaces and their machines featured on the Internet of production global map of machinery.

[Map of machinery](#)

People & Skills Specification

The People & Skills Specification (PSS) is tested by makers participating in production, to gather learnings that will inform the creation of a digital 'maker passport'.

[People & Skills Specification](#)

Contracting system for distributed production

Contracting makers will participate in the distributed production of 1125 items across 3 countries and 9 makerspaces.

[Follow the research](#)



Open Discussion

- Questions?
- What Comes Next:
 - Continuation of proof of practice, IMA
 - Development of training content/OER, mAkE



NEXT STEPS AND COMMUNITY INVOLVEMENT

How can we take this work to continue fostering community engagement and development in this space, building on the research that has been conducted, and the work that is ahead of us?

Thank you for joining us



Please get in touch if you have any questions or queries:

Twitter: @IoP_Alliance, @openknowhere

Email: info@internetofproduction.org

Join our community discussion:

<https://community.internetofproduction.org>