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/zP0l7
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


- 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

Internet of Production Alliance

ALFRED P. SLOAN FOUNDATION
Problem We’re Trying to Solve for:
Makers, Designers, Engineers, Artists (Target Audience)

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<tr>
<th>WHY: Why create a maker passport?</th>
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<td>What is the purpose, benefit[s], and utility of a passport?</td>
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<th>WHO: Who is the maker, as identified by affiliation, and which affiliations may indicate transferable/verifiable skills?</th>
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<th>WHAT: What do makers need to prove as part of the digital passport?</th>
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<td>What qualifiers are needed to indicate skills and experience?</td>
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<th>HOW: How are skills, experience, and identity verified?</th>
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<td>What authentication and credential verification processes.</td>
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MAKER PASSPORT PROJECT
TRAJECTORY: PEOPLE AND SKILLS

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

1: Jan 2023
Research
Preliminary conversations and interviews with maker community stakeholders

2: Mar 2023
Development
Document requirements for People and Skills standard for a digital maker passport

3: May 2023
Publication
Release open draft of standards and infrastructure for a digital maker passport

4: Jun 2023
Launch
Facilitate community dialog on final draft and workplan for continued development

Target Date: 30 June 2023
Spec Released June 30; Currently v4

- 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)
How could this work?

Conceptual design based on Open Badges Standard / OBV2.0 / IMS Global Learning Consortium
https://www.imsglobal.org/sites/default/files/Badges/OBv2p0Final/impl/index.html
A transdisciplinary team from Europe and Africa

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

- Global Innovation Gathering – GIG
- Greentec Capital
- Centre for Social Innovation – ZSI
- Fablab Barcelona/Fab City Foundation
- Africa Makerspace Network
- Africa Open Science and Hardware - AOSHA
- Association pour la promotion de la Science Ouverte en Haïti et Afrique – APSOHA
- Open African Innovation Research, University of Cape Town – Open AIR
- Internet of Production Alliance – IOPA
**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

**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

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

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<td>A Specification for Skills will be developed, which will form the prototype of a Maker Passport.</td>
<td>500 makerspaces and local manufacturers across Africa and Europe will be added to the IOP global map of machines.</td>
<td>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.</td>
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<tr>
<td>Specification for Skills</td>
<td>Add your machines</td>
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**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

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<th>Research capacity for impact tracking</th>
<th>Open catalogue of business models</th>
<th>Innovation - Distributed Production trials</th>
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<td>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</td>
<td>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</td>
<td>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</td>
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<th>Map of Machinery based on the Open Know-Where standard</th>
<th>People &amp; Skills Specification</th>
<th>Contracting system for distributed production</th>
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<td>The 9 makerspaces and their machines featured on the Internet of production global map of machinery. Map of machinery</td>
<td>The People &amp; Skills Specification (PSS) is tested by makers participating in production, to gather learnings that will inform the creation of a digital ‘maker passport’. People &amp; Skills Specification</td>
<td>Contracting makers will participate in the distributed production of 1,125 items across 3 countries and 9 makerspaces. Follow the research</td>
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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