

RE4DY

MANUFACTURING DATA NETWORKS

RE4DY TOOLKIT

Name of the Tool	Knowledge Graph Visualization Environment
Tool Owner	Industry Commons Foundation
Version	1.0
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Version	V1.0

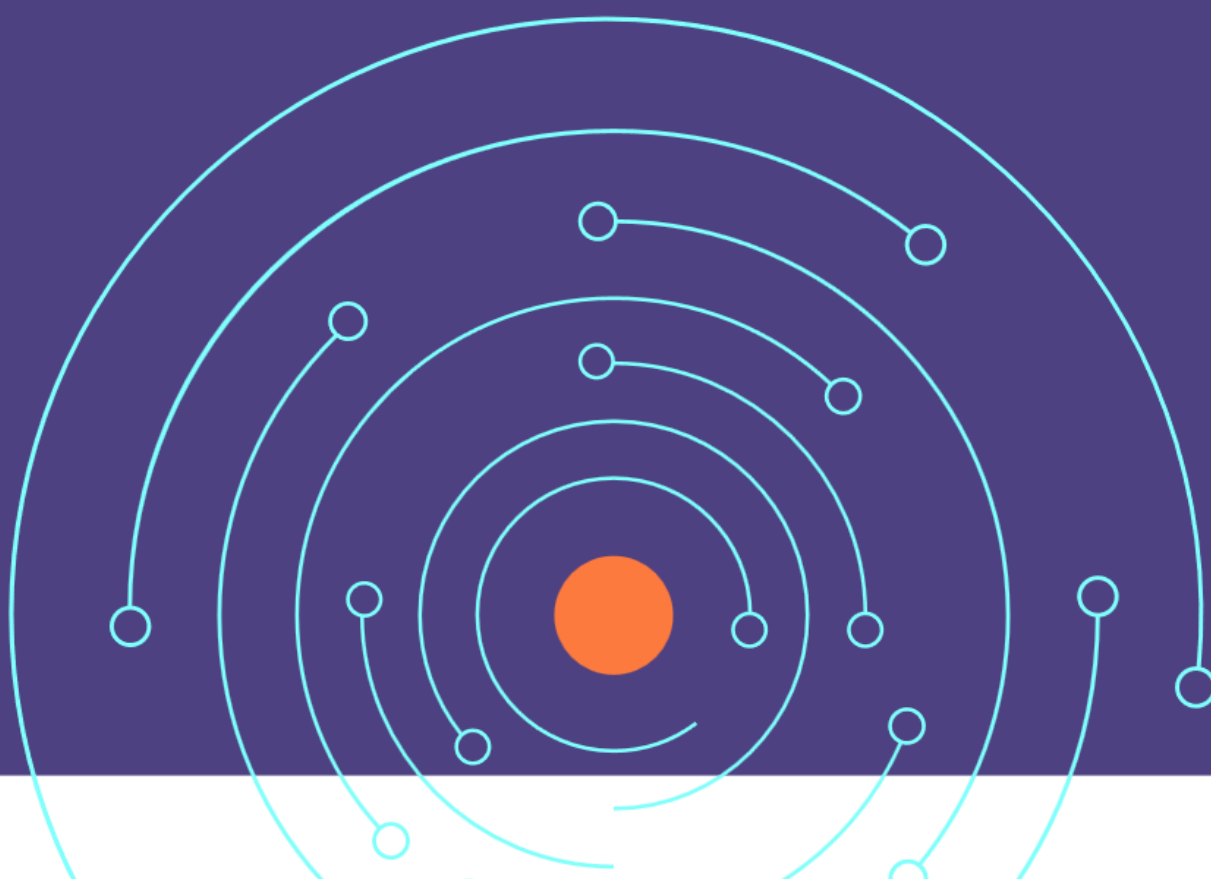


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1. Component Description

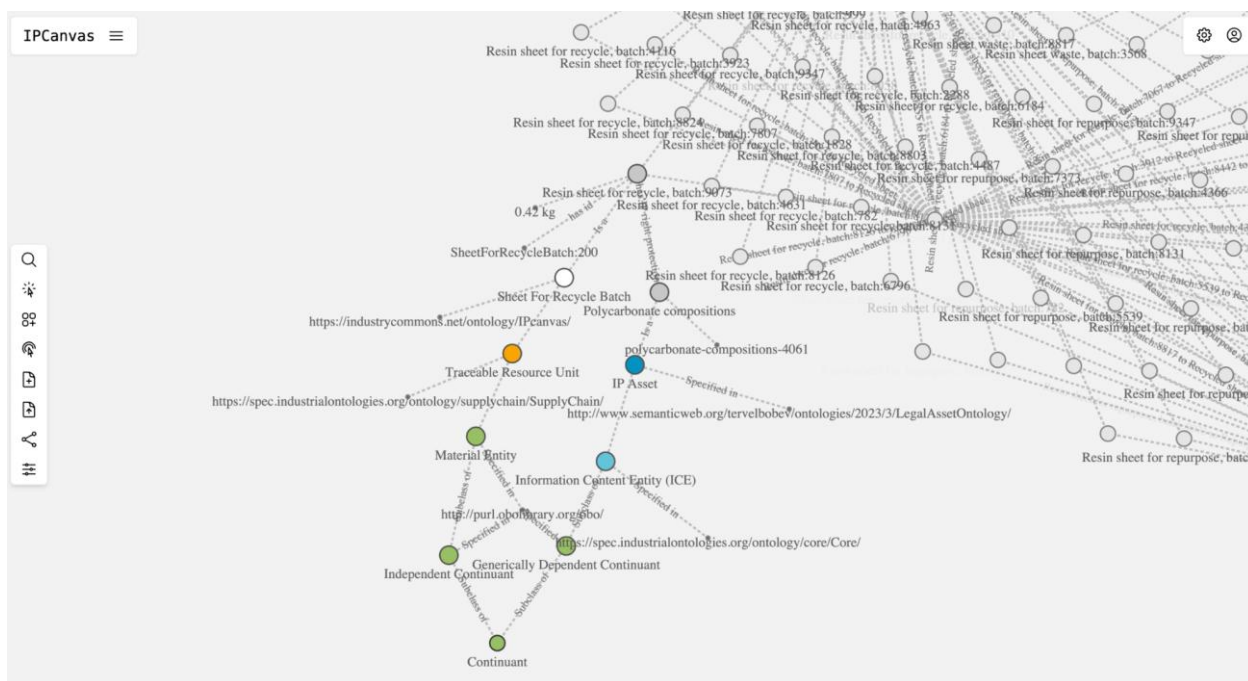
The knowledge graph visualisation environment aims to visualise knowledge graphs of different types and also supports the presentation of flows and interconnected data (an example is supply chains). The JS/TypeScript components can present significant data volumes through interactive graphs.

2. Input

The input to the JS/TypeScript components is data formatted as JSON text and CSV.

3. Output

The output is an interactive graphical model describing knowledge graphs and/or flows the input data represents.



4. Information Flow

To use the environment after installation, the user loads and prepares the data from external sources and adapts it to JSON or CSV files/variables. These are sent to the JS/TypeScript component that uses the data to create the knowledge or flow graphs. In



the resulting component graph window, the user can instruct the component to print or copy the graph for external documentation. The graph allows for interactive operation – allowing the user to interact with data points in the graph to connect to other data sources – systems for storing attributes etc.

5. Internal Architecture

The knowledge graph visualisation environment consists of a JS/TypeScript application with a defined API for data and results management and presentation.

6. API

The environment is a visualisation environment that provides visualisation components in different solutions – it does not contain an API for external systems access. Still, it has only an API for local use.

7. Implementation Technology

- GUI: JavaScript, <https://react.dev/>, <https://vuejs.org/>, <https://headlessui.com/>, <https://tailwindcss.com/>
- Backend: <https://nextjs.org/>, <https://expressjs.com/>
- Graphics programming: <https://threejs.org/>, <https://deck.gl/>, <https://luma.gl/>

8. Comments

<no comments>

