Open science hardware: Increasing the impact of academic research

Dr. Julieta Arancio, Drexel University
jca88@drexel.edu
@cassandreces / cassandreces@scholar.social
Conventional path for academic hardware innovations

<table>
<thead>
<tr>
<th>IP Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisors advice</td>
</tr>
<tr>
<td>Career evaluation</td>
</tr>
<tr>
<td>Tech Transfer Offices</td>
</tr>
</tbody>
</table>
Some problems with this system

- Slows down collaboration
- Impedes customization
- Expensive for universities
- Missed impact opportunities
An alternative paradigm
Some business models for open science hardware

<table>
<thead>
<tr>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling components, kits, devices</td>
</tr>
<tr>
<td>Selling design services</td>
</tr>
<tr>
<td>Selling technical support</td>
</tr>
<tr>
<td>Trademarks</td>
</tr>
</tbody>
</table>
Example 1: OpenEphys
Example 2: OpenTrons

Choose the method that's right for you

- Custom Protocol
  - Get our expert to create a protocol optimized for your experiment.
  - Shop custom protocols +

- Protocol Library
  - Browse well-documented, open-source protocols.
  - Browse protocol library +

- Protocol Designer
  - Use our intuitive drag-and-drop interface to create new protocols.
  - View protocol designer +

- Python Protocol API
  - Write your own protocol using our open-source Python Protocol API.
  - Get started with Python API +

Shop By Category

- OT-2 Robot
  - See the product +

- Pipettes
  - See 2 products +

- Modules
  - See 2 products +

- Universal & Filter Tips
  - See 2 products +

- Consumables
  - See 18 products +

- Services
  - See 6 products +
Example 3: OpenFlexure Microscope
How do we make open a feasible option?
Better tools in more hands…

- Customisable
- Repairable
- More accessible
- No vendor lock-in
- More & better research
Thank you!

Dr. Julieta Arancio, Drexel University
jca88@drexel.edu
@cassandreces / cassandreces@scholar.social

Learn more at:
openhardware.science