Stacked Circuits

3D Print Circuits in Minutes

With 3D printed circuits, you can prototype

>100 Times Faster

50% Lower Cost

when compared to traditional PCB prototyping

Meet the Team

Laura Lerebours

Software Development

Brian Minnick

Founder

Vineet Sharma

Web Design

Business Development

MIT EECS

MIT AEROASTRO

DMSE

MIT Schwarzman College of Computing

Circuit board prototyping is largely unchanged since the 1930s

Now, it's the rate limiting step in fast moving engineering teams

Proper circuit prototyping slows development,

but rushing untested products can be just as dangerous.

Galaxy Note 7

Recall

$17B

Income Loss

reuters.com

GM Ignition

Recall

124

Deaths

justice.gov

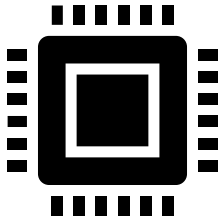
Stacked Circuits turns

off the shelf filament-based 3D printers

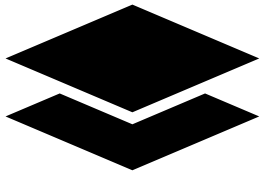
into circuit board factories

Traditional PCB Prototyping

Digital Design

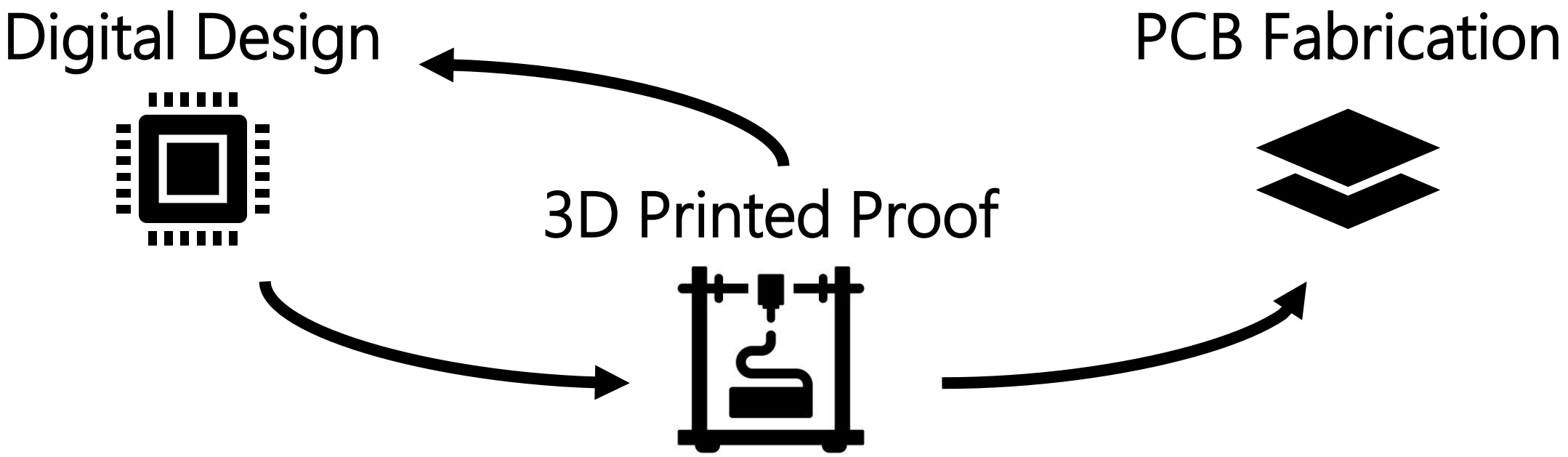


PCB Fabrication



Slow
Usually Made Overseas
Carbon Intensive

PCB Prototyping With Stacked Circuits



Ready in Hours
Lower Cost
Faster Iterations

For a Standard 2-Layer Board

Stacked Circuits		Direct to PCB Fabricator	
$1.40*	1 hour	$5.99**	4-6 days

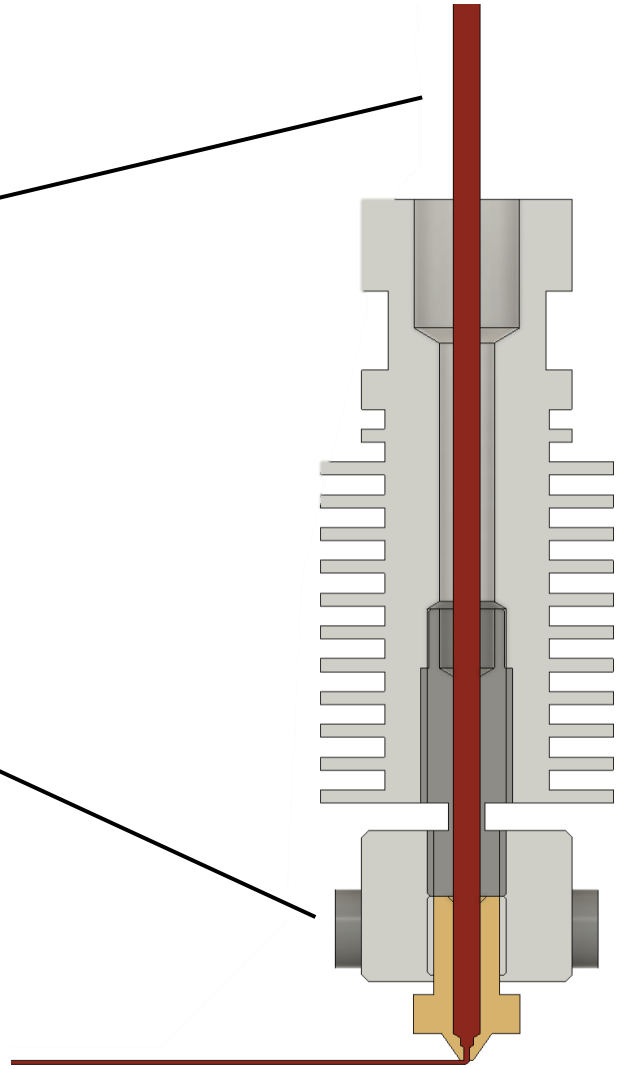
All prices quoted for a small 145mm x 70mm board, prices increase for larger boards with additional options
* Estimated cost of Stacked Circuits material at suggested retail price including delivery, taxes, and fees
** Cost for single board from JLCPCB online quote tool including delivery, taxes, and fees

How Does FDM 3D Printing Work?

Plastic Filament

Melted and Extruded

Through Nozzle



Our Innovation?

Replace Plastic Filament with Metal

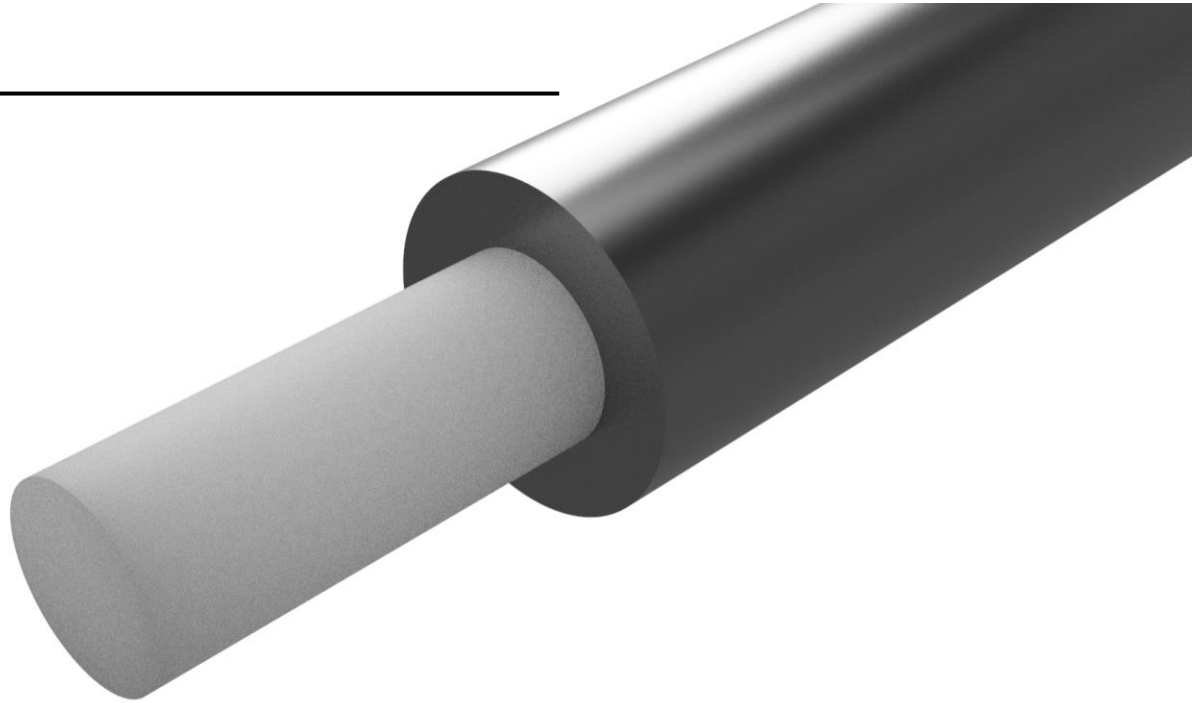
Our Patent-Pending 100% Metal Filament

Outer Shell

makes our filament compatible with standard extrusion systems

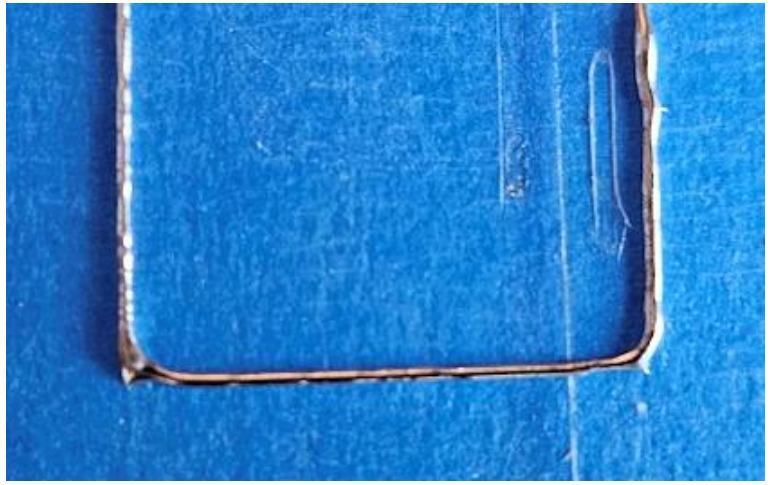
Engineered Alloy Core

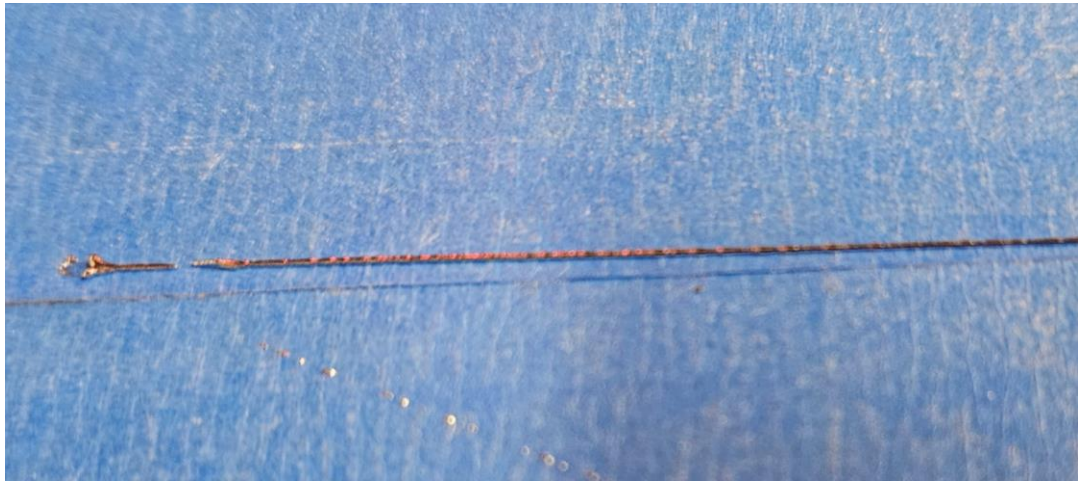
provides melt stability and increases mechanical strength



Normal Metal – *Discontinuous*

Stacked Circuits – *Complete Wires*





Early prototype material only, results to improve

Our unique design means
Stacked Circuits is compatible with any of the

>8M FDM 3D Printers

sold in the last 5 years, the most common 3D printing technology[1]

Circuit Prototyping Is Not a Niche Market

One of our competitors makes

>9M PCBs

and services

>6M Customers

each year

https://jlcpcb.com/aboutUs

The electronics prototyping industry is projected to expand by

4x

from

3.3B to 12.1B

Between 2021 and 2031

https://www.futuremarketinsights.com/reports/electronic-prototyping-market

Multiple Market Segments

Smallest *Largest*

Federal R&D Laboratories

Sending classified materials outside the lab incentivizes local circuit board production

Individuals & Makers

Lower cost and faster alternative, perfect for one-off non-production boards

Academia & Research

Unconventional uses of the material for research in materials, RF electronics, etc.

Initial Focus

Commercial Electronics

Save engineering labor time by producing prototypes in house, reduces errors

Near Term Goals

Customer Pilot Program

Inform product launch with customer experiences

Confirmed Partners

- MIT Lincoln Laboratory
- Ohio State University

Develop Software Infrastructure

Circuit-to-print conversion

Circuit Repository


Pilot With Select Partners
Pre-Launch Funding
Full Brand Launch
Summer 25
Fall 25
Spring 26

Additional Information

Revenue Channels

Direct Material Sale

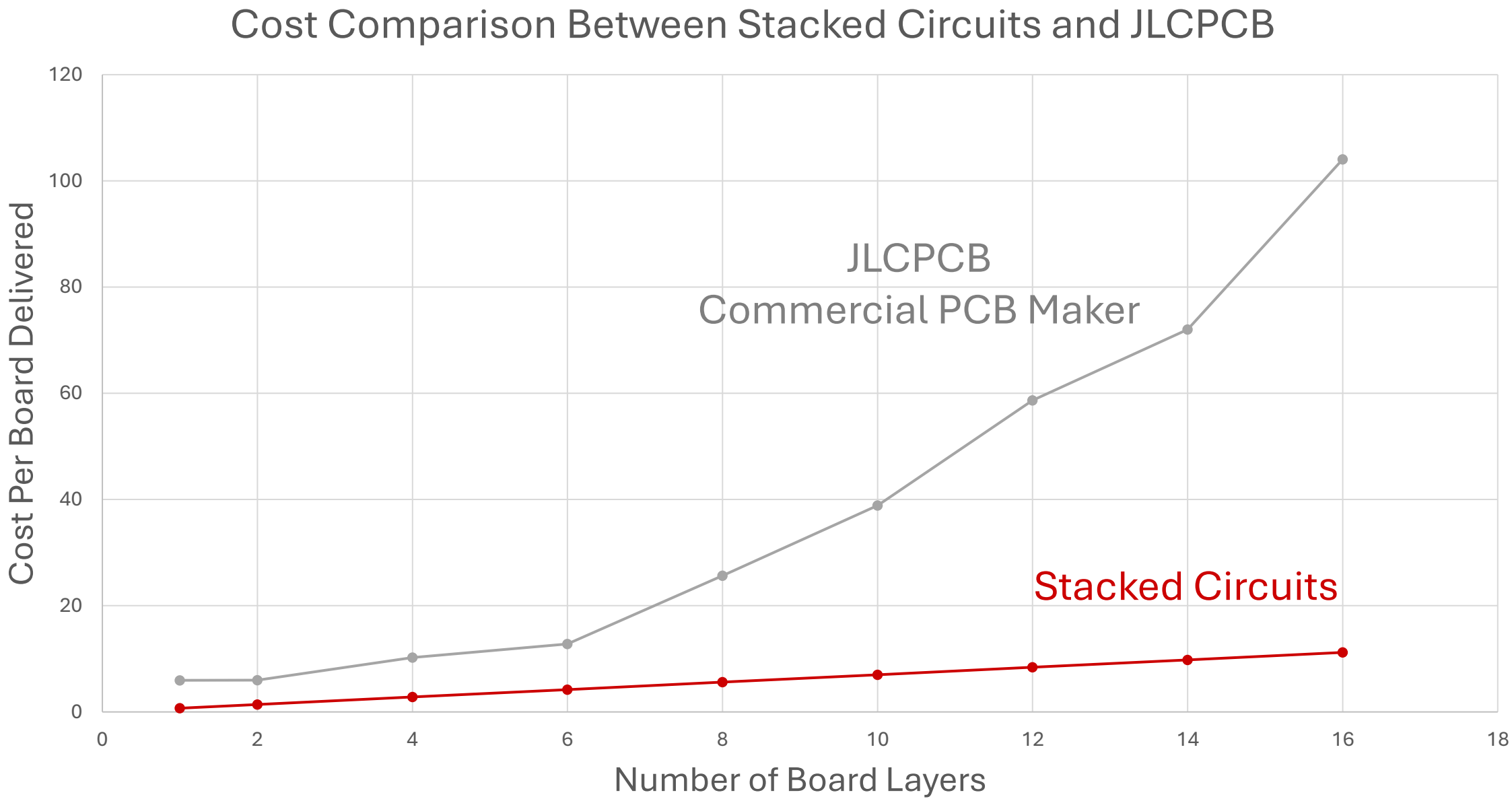
Sale of metal 3D printing filament for circuits or structural products

Software Licensing

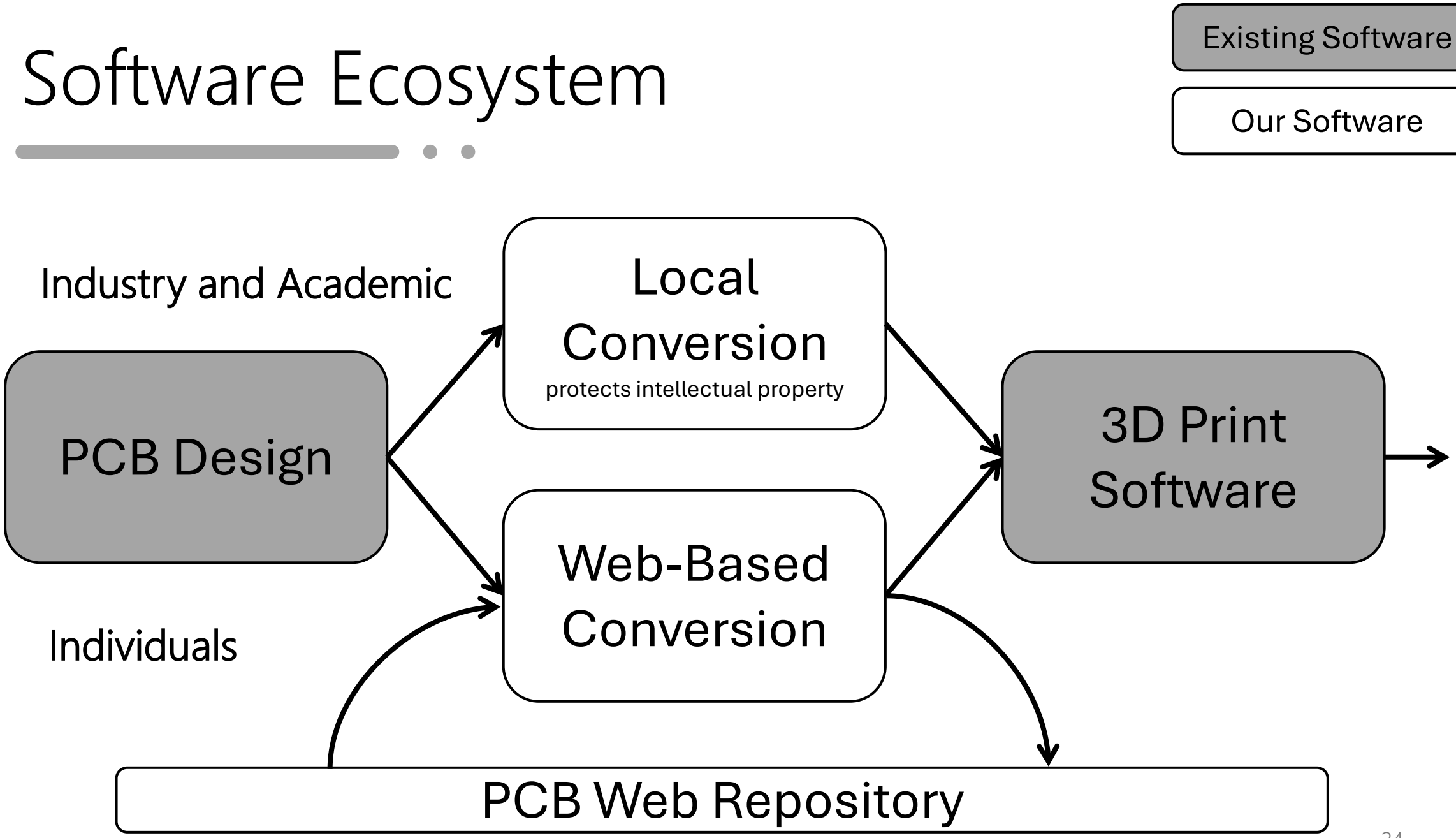
Local PCB conversion cuts out need for cloud upload, required for some customers.

Model Hosting

Users opt to sell models to other users; take a percentage of this transition.


Cost Comparison Between Stacked Circuits and JLCPCB
Cost Per Board Delivered
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
Number of Board Layers
JLCPCB
Commercial PCB Maker
Stacked Circuits

Software Ecosystem



Key Insights From Customer Interactions

Current Problems

- Quality concerns on PCB routers
- Organizing components
- Assembly time

New Material Applications

- RF protection
- Thermal management
- Antennas
- Power connections

Key PCB Properties

- Size, Weight, and Power
- Compatible with existing layout tools
- True facsimile

Great interest in printing metal for structural components