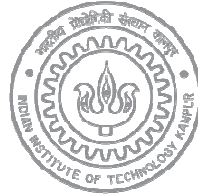


FIEECE

National Centre for Flexible Electronics



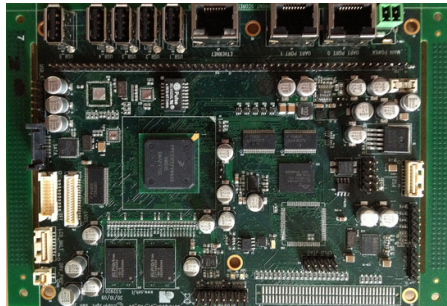
Call for Expression of Interest

Flexible and stretchable multi-layer PCBs

2nd October 2015

Background

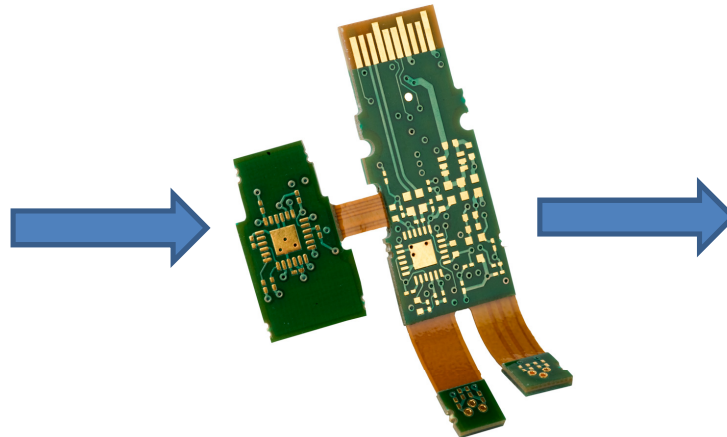
Rigid



www.rpcelectronics.com

- TVs, Laptops, tablets, mobile phone and other conventional electronics gadgets

Rigid-Flex



www.spectracad.com

- Night vision goggles, hearing aids, wearable devices and other applications requiring bending operations.

Flexible

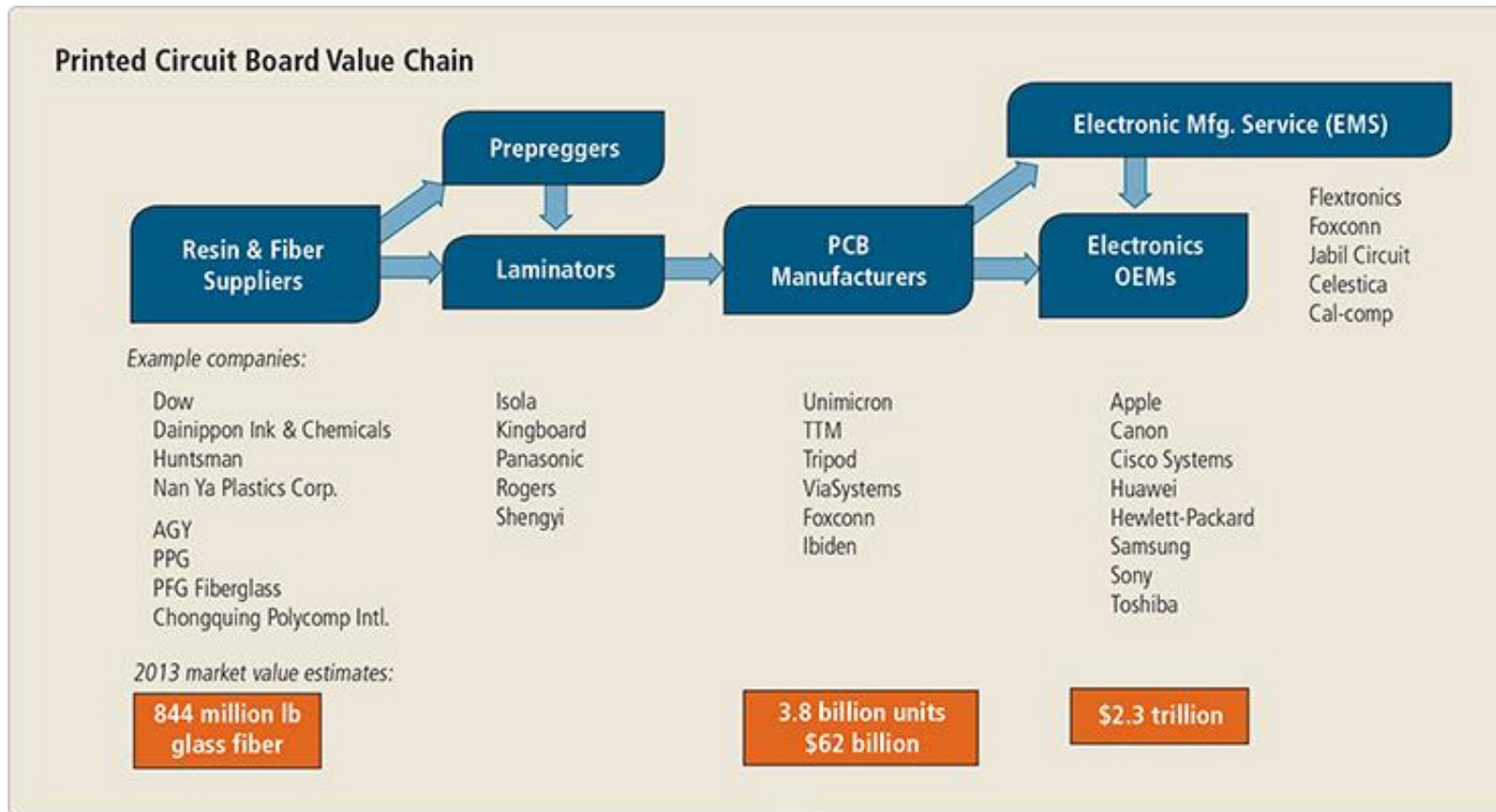


www.multi-circuit-boards.eu

- Needed for applications requiring various form factors and extreme bendability

- Flexible PCB technology needs to precede flexible electronics product

PCB Ecosystem

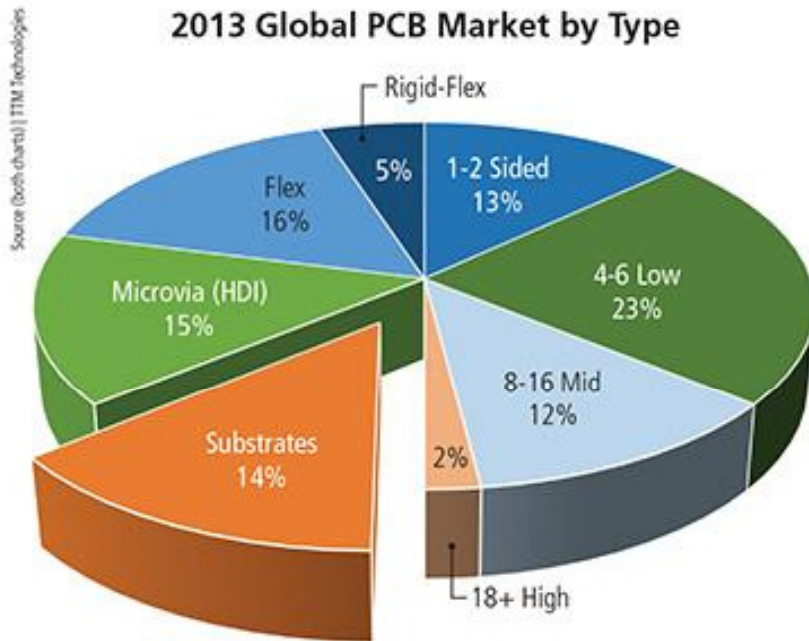


www.compositesworld.com, TTM Technologies

PCB applications are spread across the broad value chain



Market Size and Potential

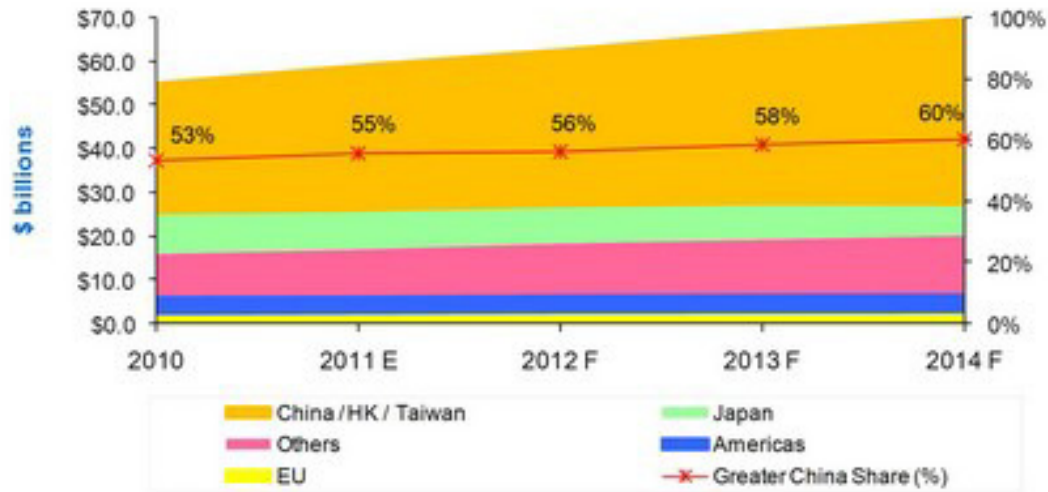


www.compositesworld.com, TTM Technologies

Flexible and Rigid-Flex PCB market is showing higher growth rate compared to rigid only

Challenges – India Specific

World PCB market



Source: N.T. Information Ltd. April 2012

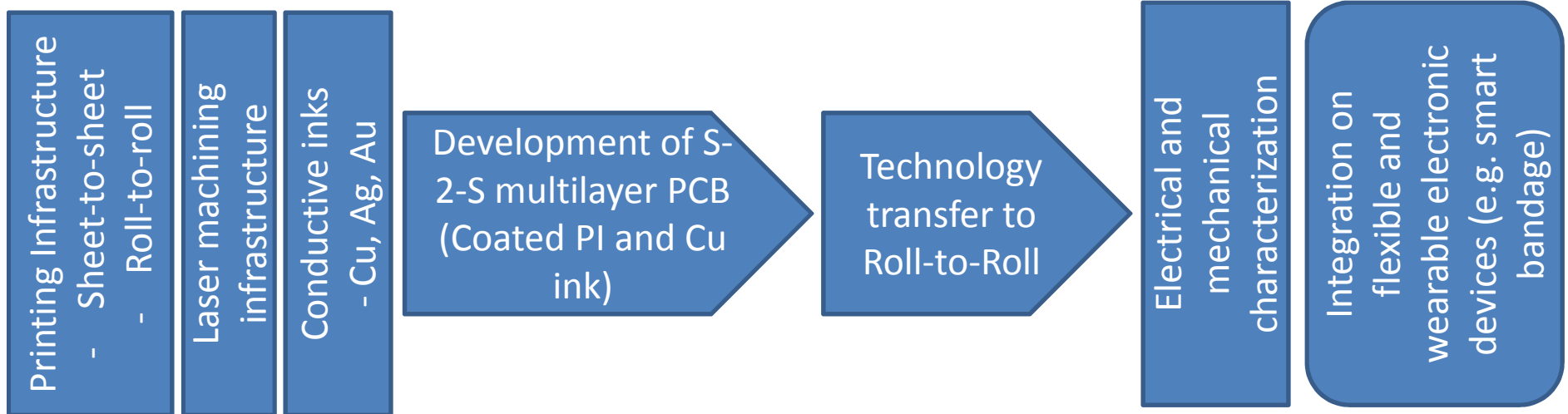
Region	2010 \$B	2014 \$B	10 / 14 CAGR
China / HK / Taiwan	\$29.3	\$42.2	8.8%
Japan	\$9.9	\$7.6	-7.0%
SE Asia, Korea, Others	\$9.7	\$13.3	7.9%
Americas	\$3.4	\$3.7	2.6%
EU	\$2.8	\$3.2	2.5%
World	\$55.1	\$70.0	5.8%

- Indian Flexible PCB industry has negligible global presence
- Also, Indian flexible PCB industry is not yet ready for flexible electronics market

⇒ Need for an R&D push for flexible (and stretchable) PCB industry

Proposed Solution

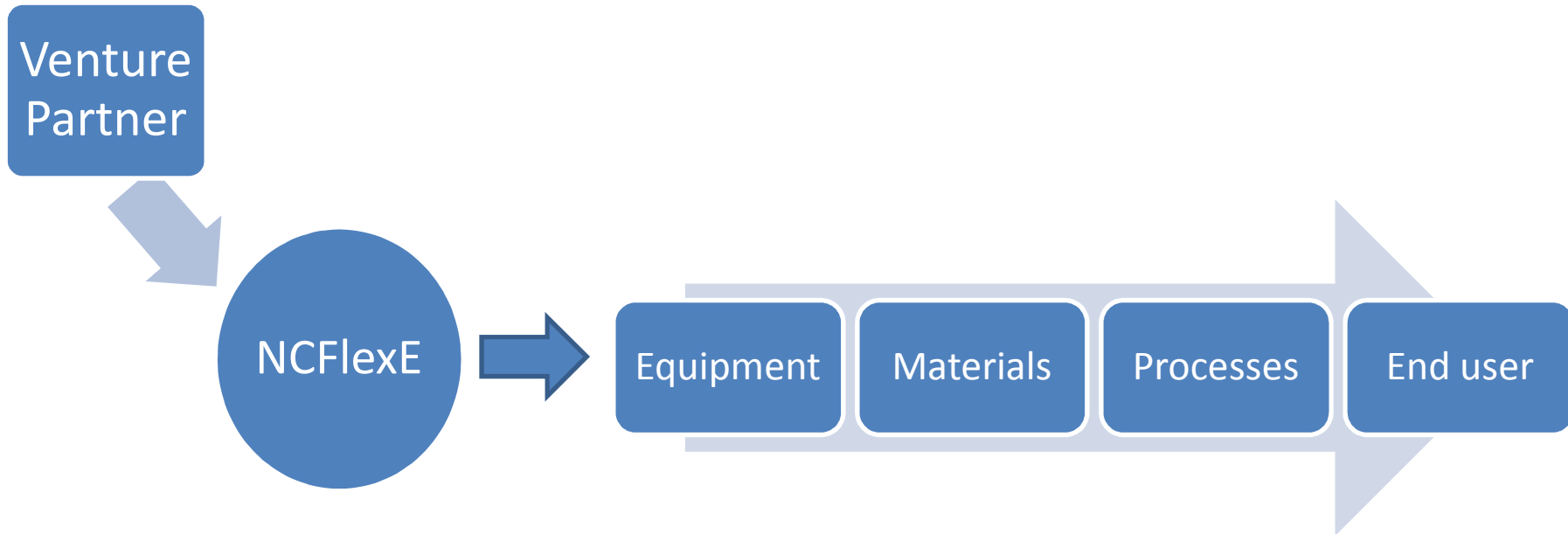
- **FlexE Centre** is developing a **roll-to-roll** compatible additive multi-layer flexible and stretchable PCB manufacturing technology



Advantages of proposed solution

- Additive technology
 - **Less material consumption**
 - **Non-vacuum processes**
 - ⇒ **Cheaper and greener**
- Roll-to-roll process ⇒ high through-put
- **Validation** of the flexible PCB technology on electronic devices developed by FlexE Centre

Call for Partners



- ✓ We are seeking partners across the value chain shown above
- ✓ We are looking for partners to enable the scaling and manufacturability of the developed processes
- ✓ Preferential terms for early partners

Contact Information

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Also visit our webpage for more details on partnership models and other technology domains: www.ncflexe.in