

FLEXE

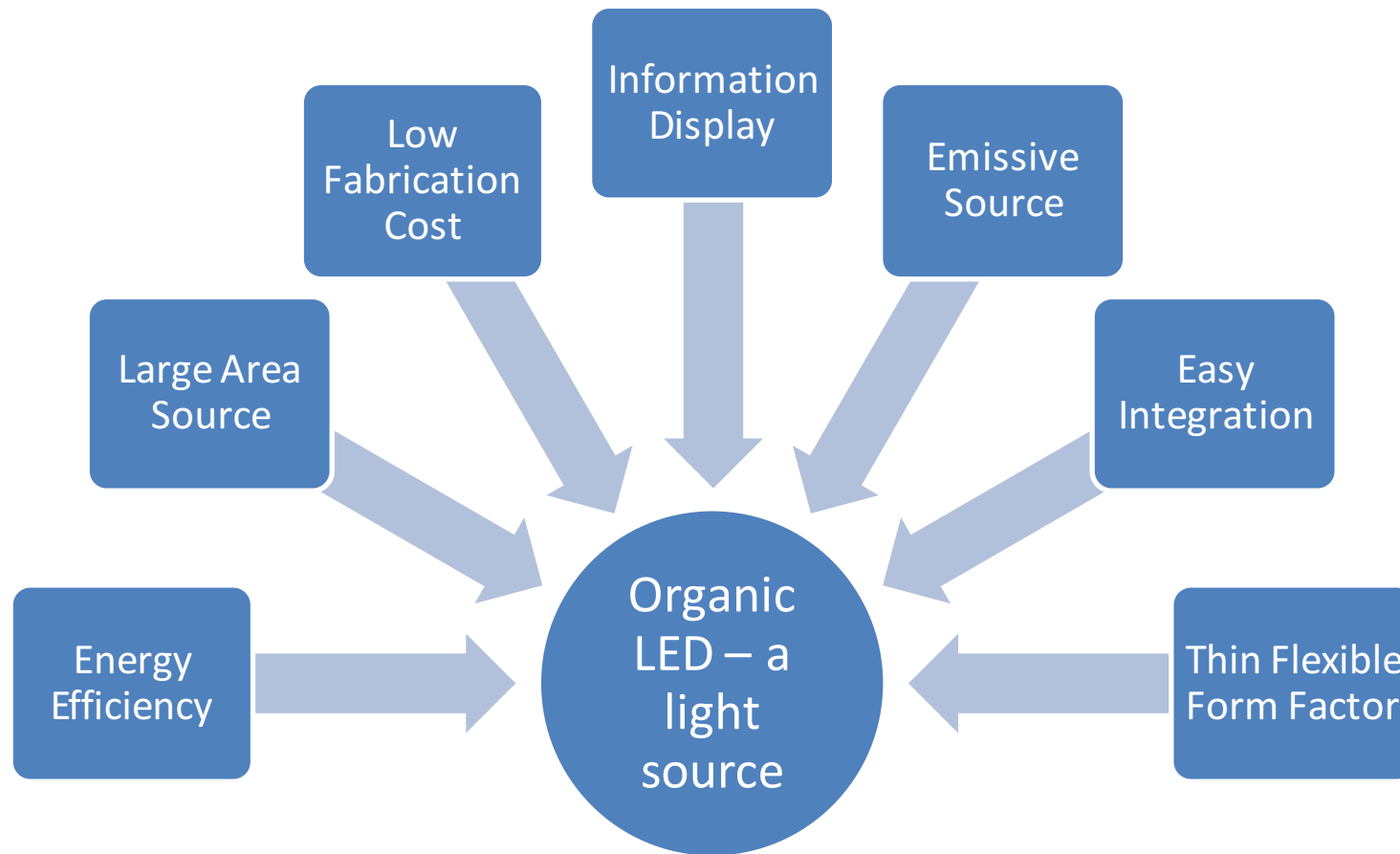
National Centre for Flexible Electronics



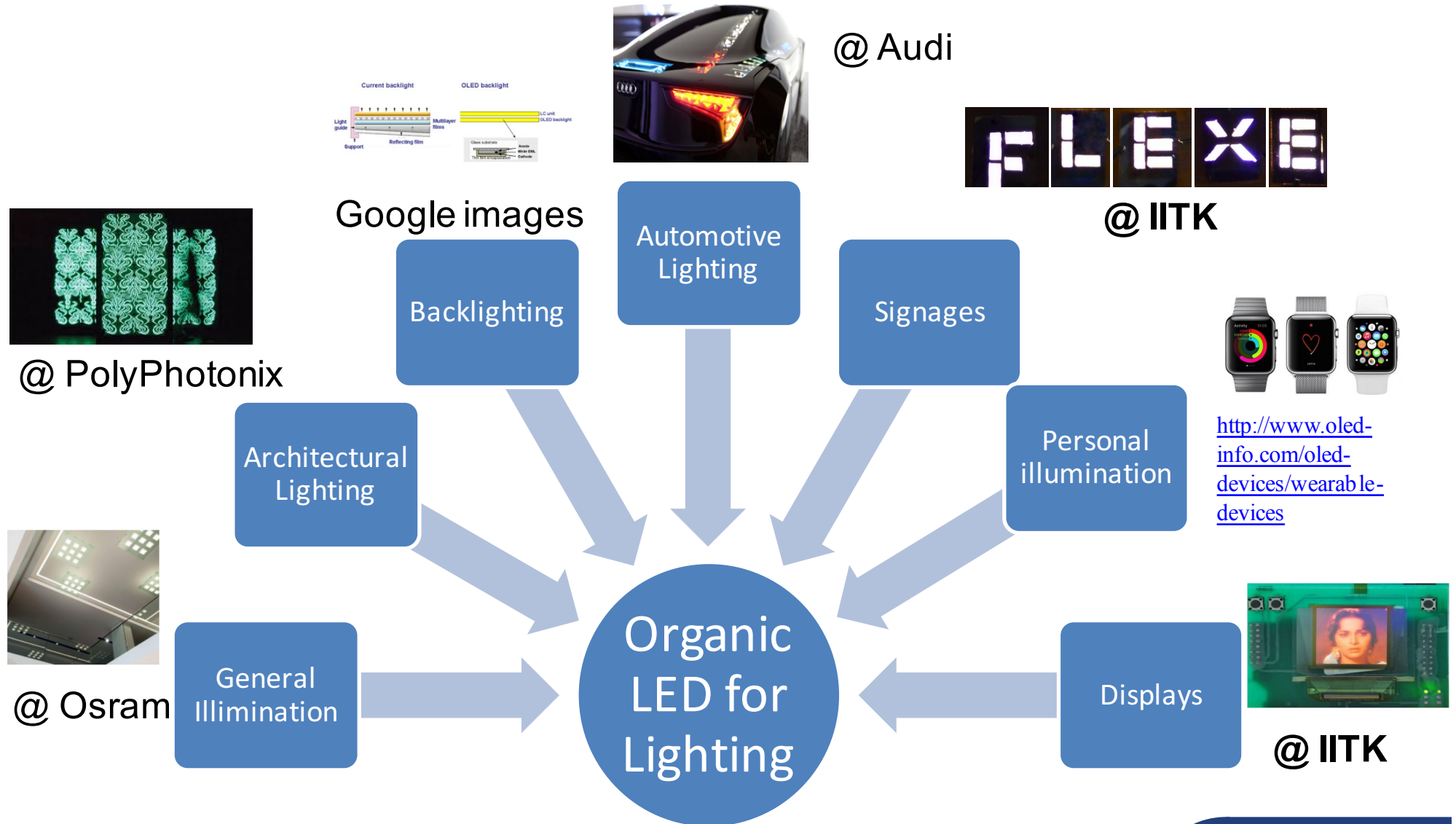
Call for
Expression of Interest
**Organic LED for Lighting and
Displays**

27th August 2015

Technology Advantage



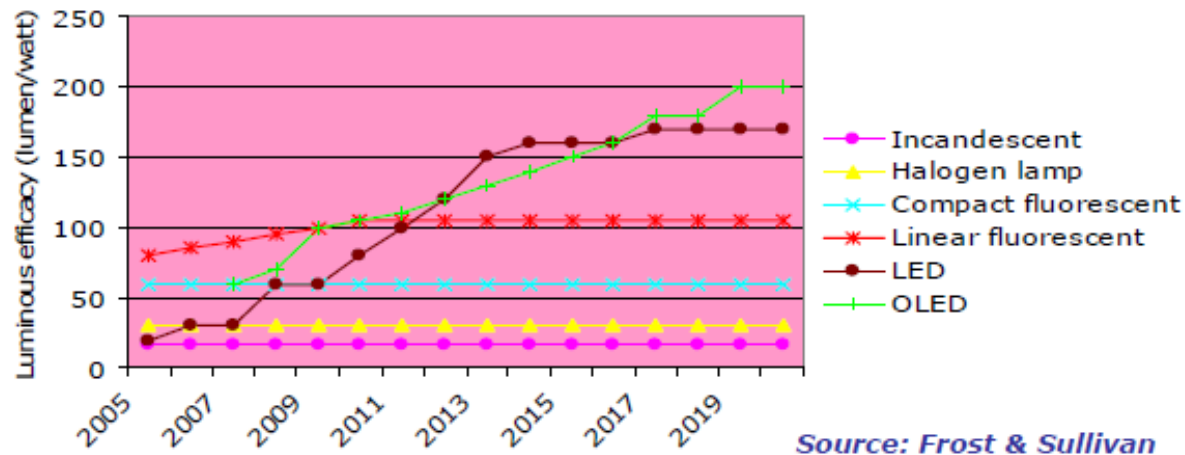
Applications



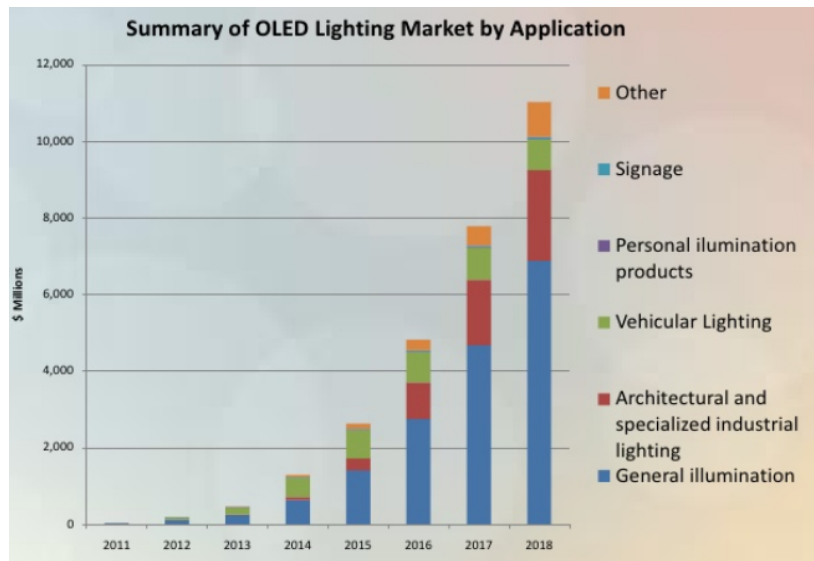
Advantages of OLED: Lighting

@ Osram

Light Market: Improvements in Luminous Efficacy of Light Sources (World), 2005-2020



Market Size and Potential



NanoMarkets' OLED General Lighting Forecast (\$ Millions)

	2011	2012	2013	2014	2015	2016	2017
Worldwide consumption of light bulbs, tubes and panels (billions)	16.2	15.3	14.4	13.4	12.3	11.2	10.1
Penetration by OLEDs (%)	0.0005	0.0026	0.0083	0.033	0.12	0.42	1.30
OLED panels shipped (millions)	0.08	0.4	1.2	4.5	15.2	47.0	131.2
Price per panel (\$)	400.0	300.0	207.0	142.8	92.8	58.5	35.7
Market (\$ millions)	31.6	120.0	248.4	637.6	1,410.7	2,749.8	4,680.0

www.nanomarkets.net

Proposed Solution

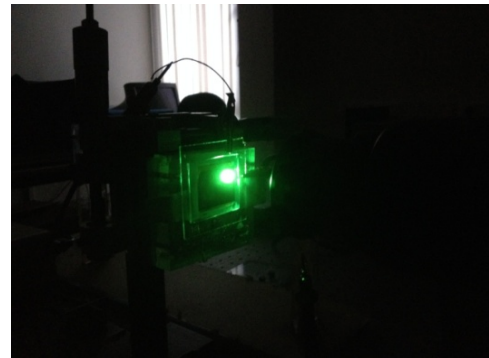
- Develop white OLEDs
 - Tiles of various sizes
 - Efficient
 - Long life
 - Flexible substrates
 - At reduced cost
- Integrate low information displays with electronic components to improve functionality



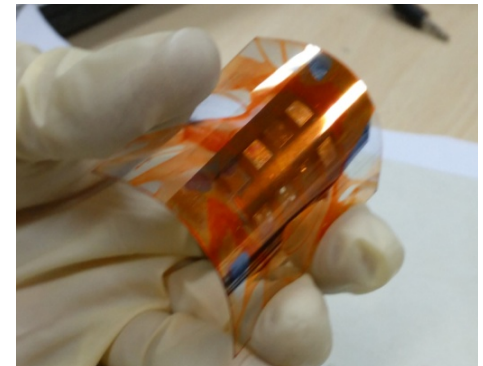
@ IITK



@ LG chemicals



@ IITK



@ IITK

Advantages of Proposed Solution

- Flat lighting elements consisting of thinner and lighter construction design
- Large area light panel fabrication
- Low cost fabrication
- OLEDs can be combined with low power and compact electronics
- Alternative to fluorescent tubes for road and building lighting
- Able to produce all colors and output white light with a high color rendering index.



LG's Light Panel
<http://www.oled-info.com>

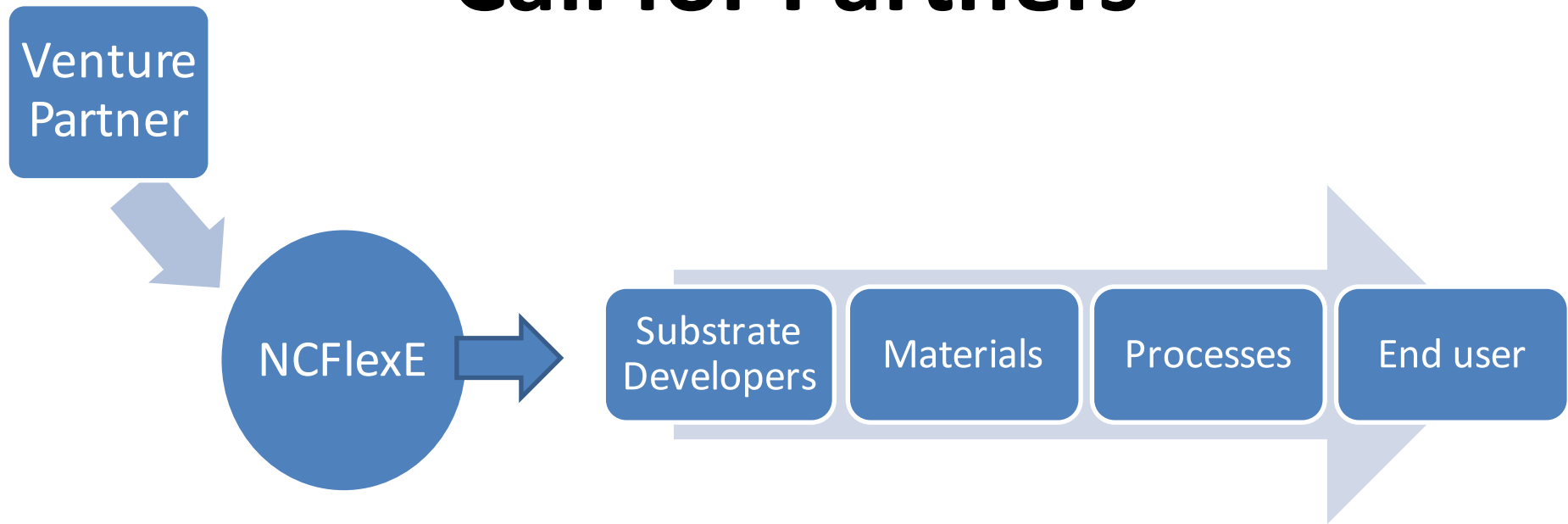


Transparent OLED Signage
<http://www.digitalsignagetoday.com>

Key Drivers

- Energy efficiency
- New form factors – Thin, Lightweight
- Large area – printing allows large scale fabrication
- Better performance
- Green technology

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