



Silterra Malaysia Sdn Bhd

“Driving Innovation”

3rd ASEM University-Business Forum

Kuala Lumpur 5 November 2012

Presentation Outline

- 1 **About Silterra**
- 2 **Growth Opportunities**
- 3 **The Structure of Malaysia's Electronics and Electrical Industry**
- 4 **Collaborations & Moving Forward**

1. About Silterra

Gartner Foundry Ranking 2011. Silterra is a Tier 2 Foundry

Table 1. Top 20 Semiconductor Foundries (Millions of U.S. Dollars)

2010 Rank	2011 Rank	Change in Rank	Vendor	Revenue 2010	Revenue 2011	Change (%) 2010-2011	Share (%) 2011
1	1	0	TSMC	13,332	14,533	9.0	48.8
2	2	0	UMC	3,824	3,604	-5.8	12.1
3	3	0	Globalfoundries	3,520	3,580	1.7	12.0
4	4	0	SMIC	1,554	1,319	-15.1	4.4
6	5	1	TowerJazz	509	613	20.4	2.1
8	6	2	IBM Microelectronics	500	545	9.0	1.8
7	7	0	Vanguard International	505	516	2.2	1.7
5	8	-3	Dongbu HiTek	512	483	-5.7	1.6
10	9	1	Samsung*	390	470	20.5	1.6
19	10	9	Powerchip	140	431	207.9	1.4
11	11	0	HHNEC	370	389	5.1	1.3
9	12	-3	MagnaChip Semiconductor	410	338	-17.6	1.1
13	13	0	Fujitsu Semiconductor	275	280	1.8	0.9
12	14	-2	X-Fab	317	278	-12.3	0.9
14	15	-1	Grace Semiconductor	250	250	0.0	0.8
15	16	-1	CSMC	225	230	2.2	0.8
16	17	-1	HeJian Technology	212	220	3.8	0.7
17	18	-1	Silterra	180	180	0.0	0.6
18	19	-1	Rohm	174	160	-8.0	0.5
20	20	0	Phenitec Semiconductor	148	155	4.7	0.5
			Others	958	1,180	23.2	4.0
			Total Market	28,305	29,754	5.1	100.0

"Big Four" owns about 75% of the global market

*Samsung revenue does not include the ASIC business from Apple.

UMC = United Microelectronics Corp.

SMIC = Semiconductor Manufacturing International Corp.

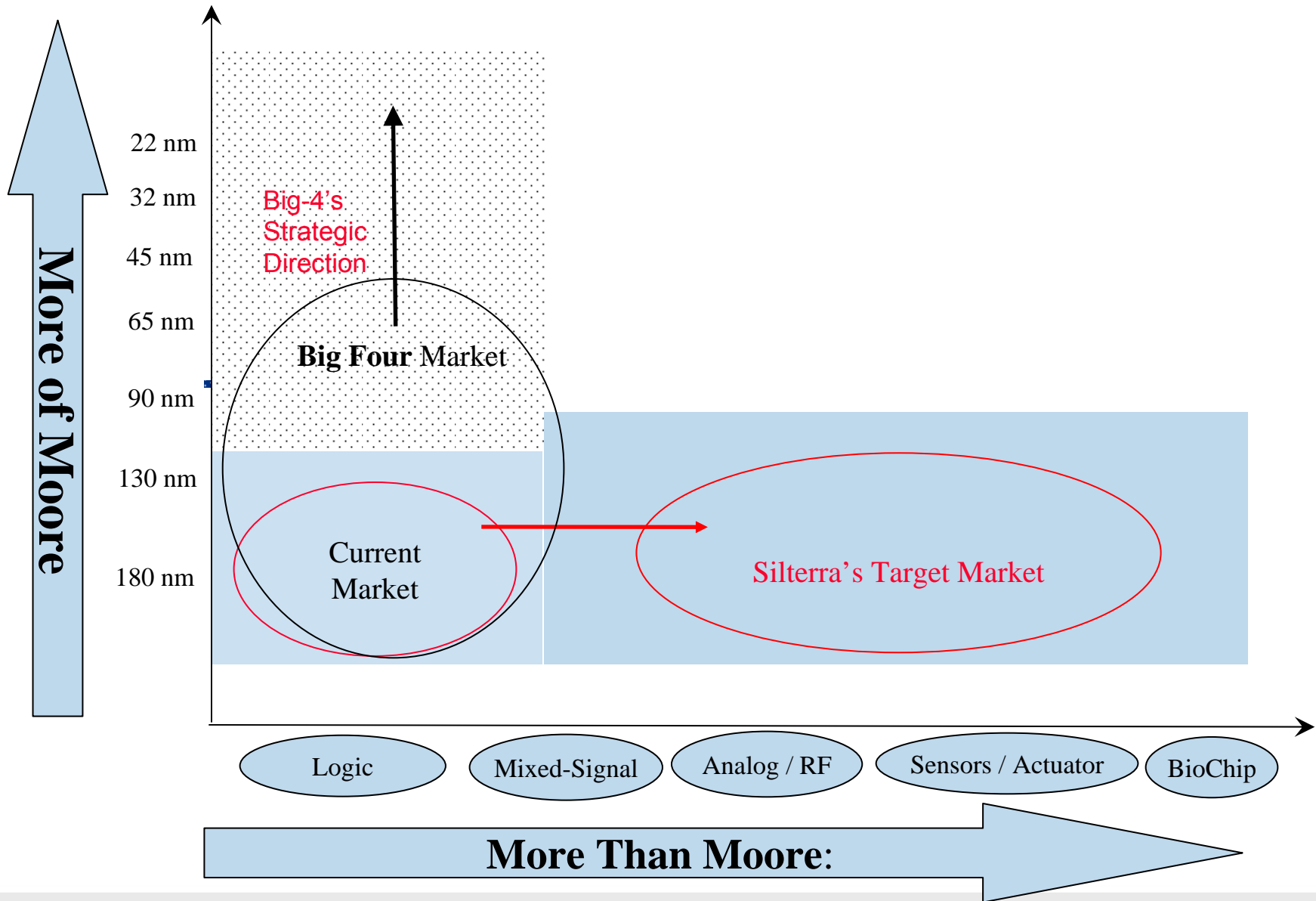
HHNEC = Hua Hong NEC

CSMC = Central Semiconductor Manufacturing Co.

Source: Gartner (April 2012)

Strictly Private and Confidential

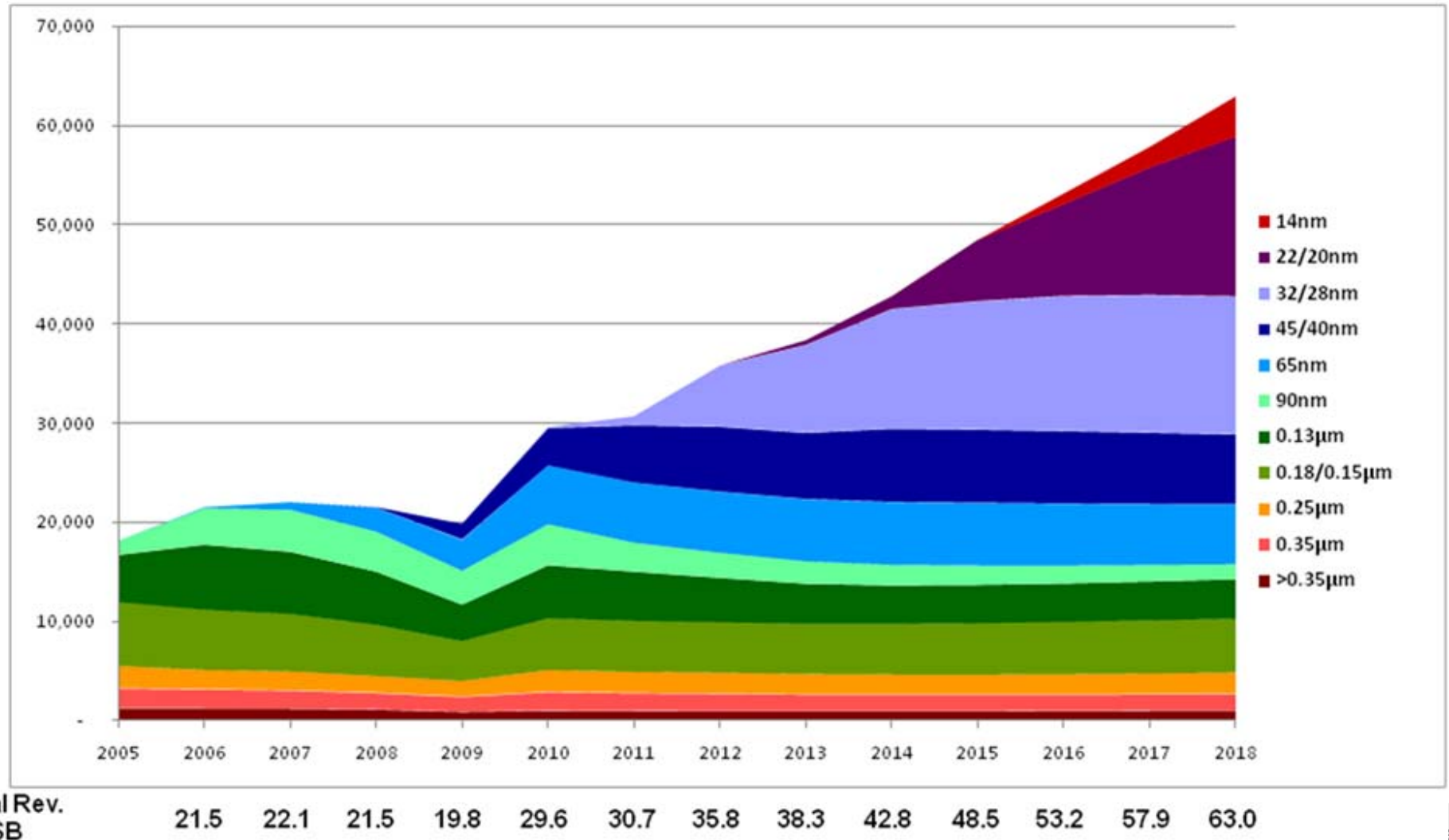
Technology Roadmap for Semiconductor Foundries..



2. Growth Opportunities

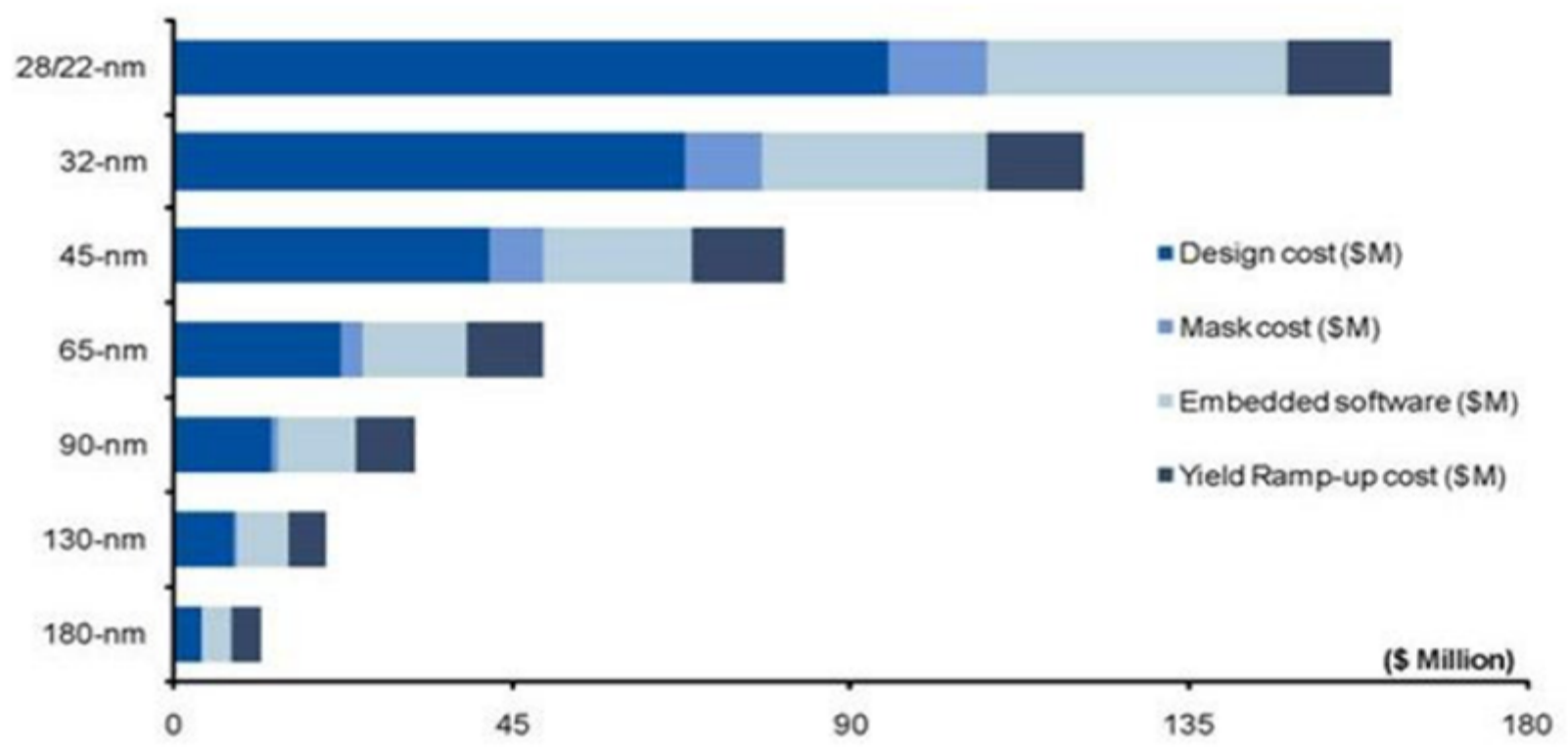
Market Size by Tech Node – Opportunities for mature tech extend well-beyond 2020...

Annual Revenue by Node – 2005 to 2018



Cost of Design by Tech Node – the increased cost of design for the advanced tech nodes ensures the ‘stickyness’ of the mature tech nodes and continued relevance of the mature foundries

Figure 1. Estimated Chip Design Cost, by Process Node, Worldwide, 2011

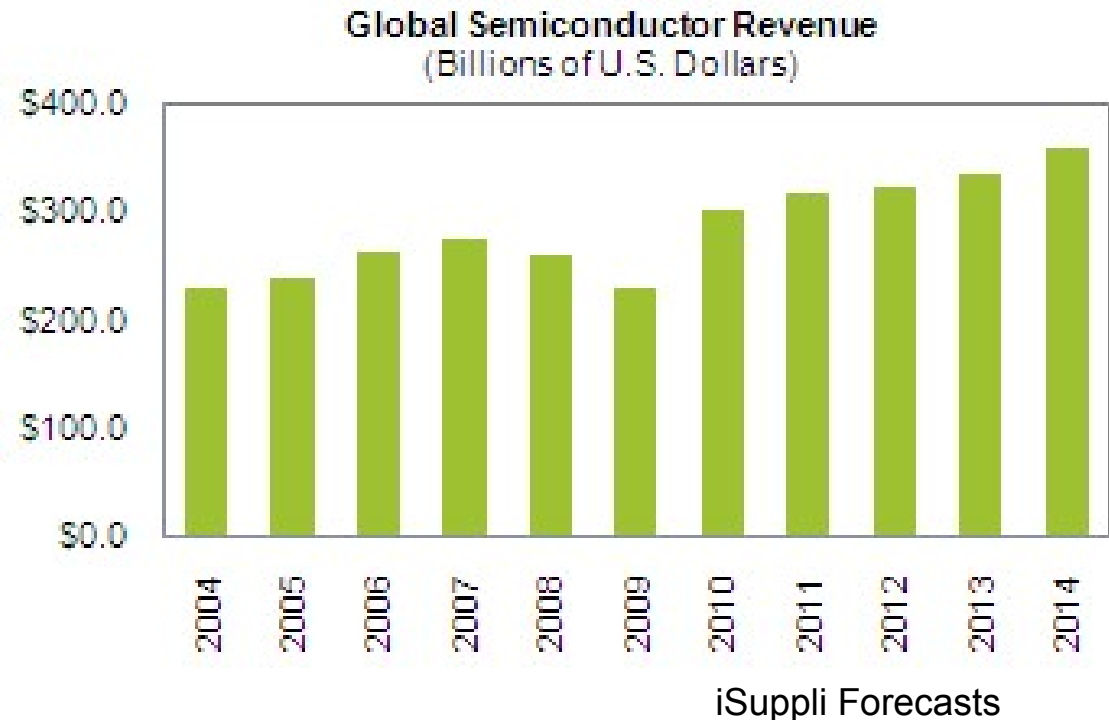


Source: Gartner Report "Competitive Landscape: Application-Specific Standard Product Semiconductors, Worldwide, 2011" (G00216498), Figure 2, Page 6.

From Nov11 GSA report

Malaysia can capitalise on industry trends..

- Demand for greater efficiency in the industry is a real opportunity for a country like Malaysia
 - Malaysia' cost is very competitive
 - Talent supply is available
 - A Sympathetic government
- Structural Changes to the Semiconductor Industry requires physical footprints to be retained elsewhere
 - Going fablite or fabless by the Japanese, European and US IDM's
- Risk Mitigation and Business Continuity Plans calls for a low-risk physical location
 - 'safer' environment to run capex-intensive facilities becomes a requirement

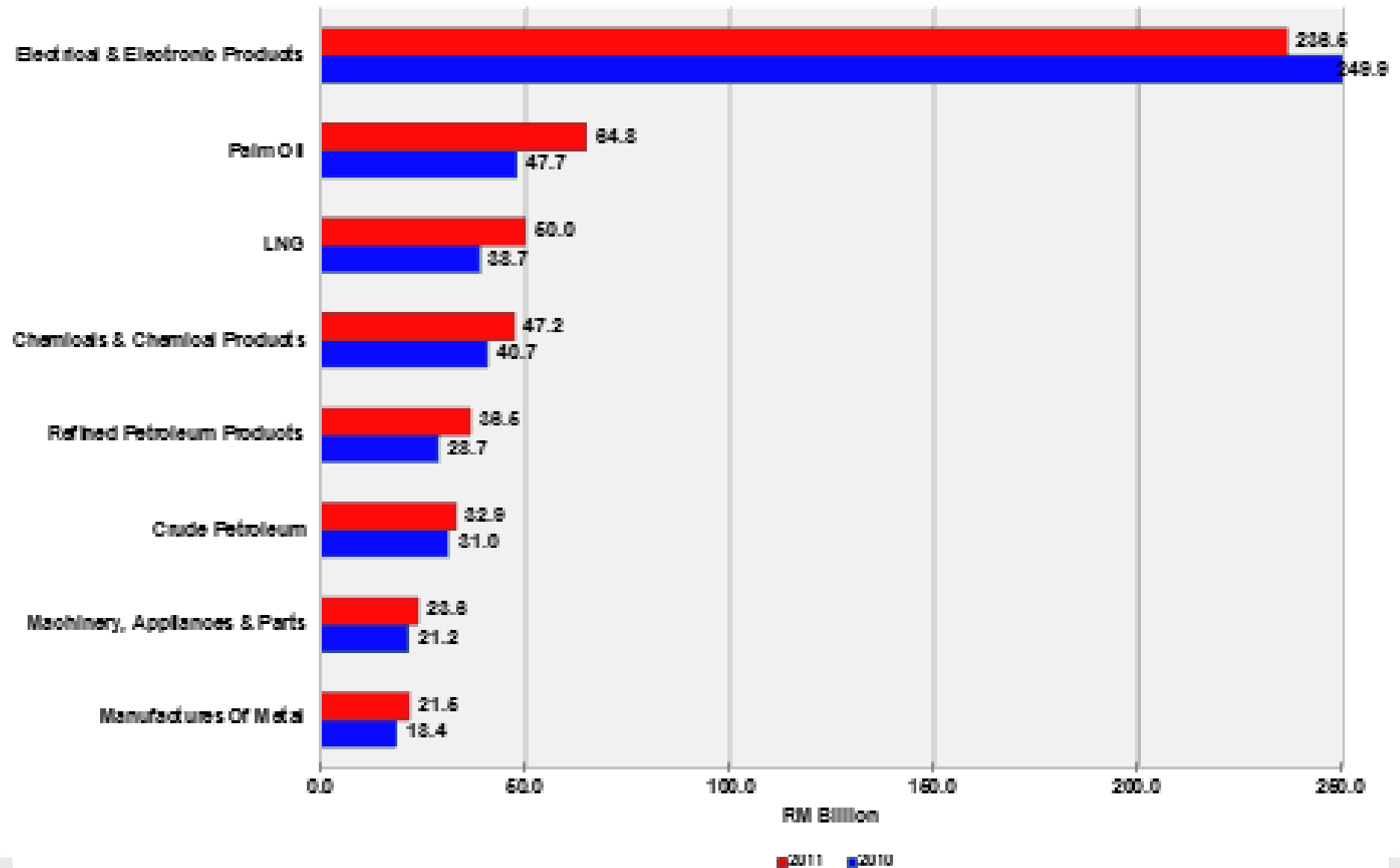


Opportunity for Malaysia:

- Estimated \$20 – \$30 B/year in the mature technology market (0.22 to 0.09 micron)
- Malaysia can leverage on the presence of the existing Assembly & Test operations in Malaysia.

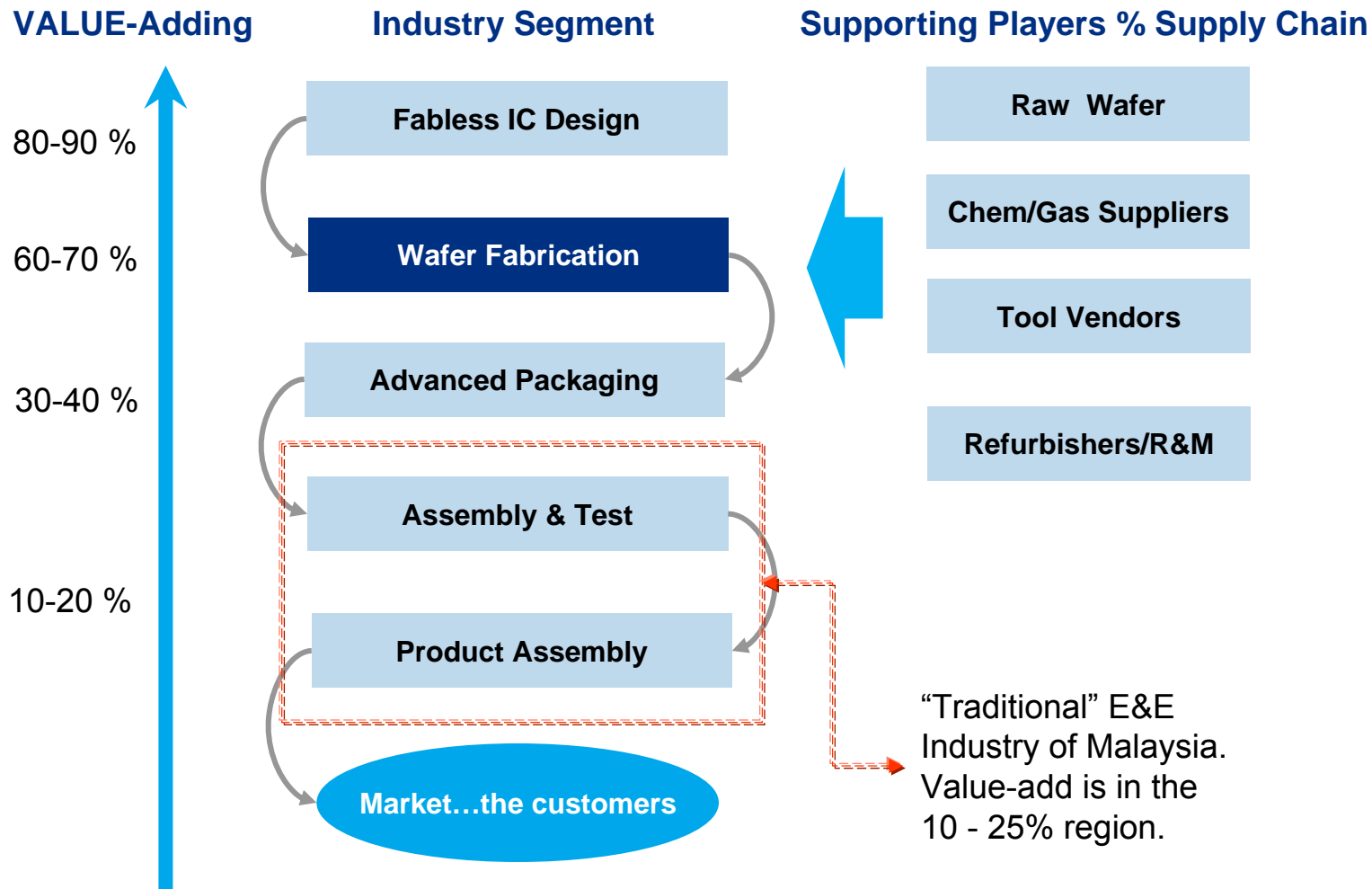
2. Malaysia's Industry Structure

For 2011, E&E Exports far outstrip other Malaysian exports...



The Malaysian Semiconductor Ecosystem – filling-up the gaps of the Value-Chain and the Supply-Chain

In the last 40 years, Malaysia has developed an industrial base across the entire semiconductor value chain populated by local players and multinationals.



4. Moving Forward

The National E&E 2020 Strategy: Focus on 4 sectors and 4 regional clusters

4 Focus Sectors

- **Semicon:** Build out value chain capabilities with fabs, design and advanced packaging
- **Solar:** World's #2 producer by 2020 (from #3 in 2011)
- **LEDs:** Light up the world with Solid State Lighting
- **Industrial Electronics:** Build on test & measurement and wireless communication clusters; expand and strengthen other Industrial Electronics sub-segments

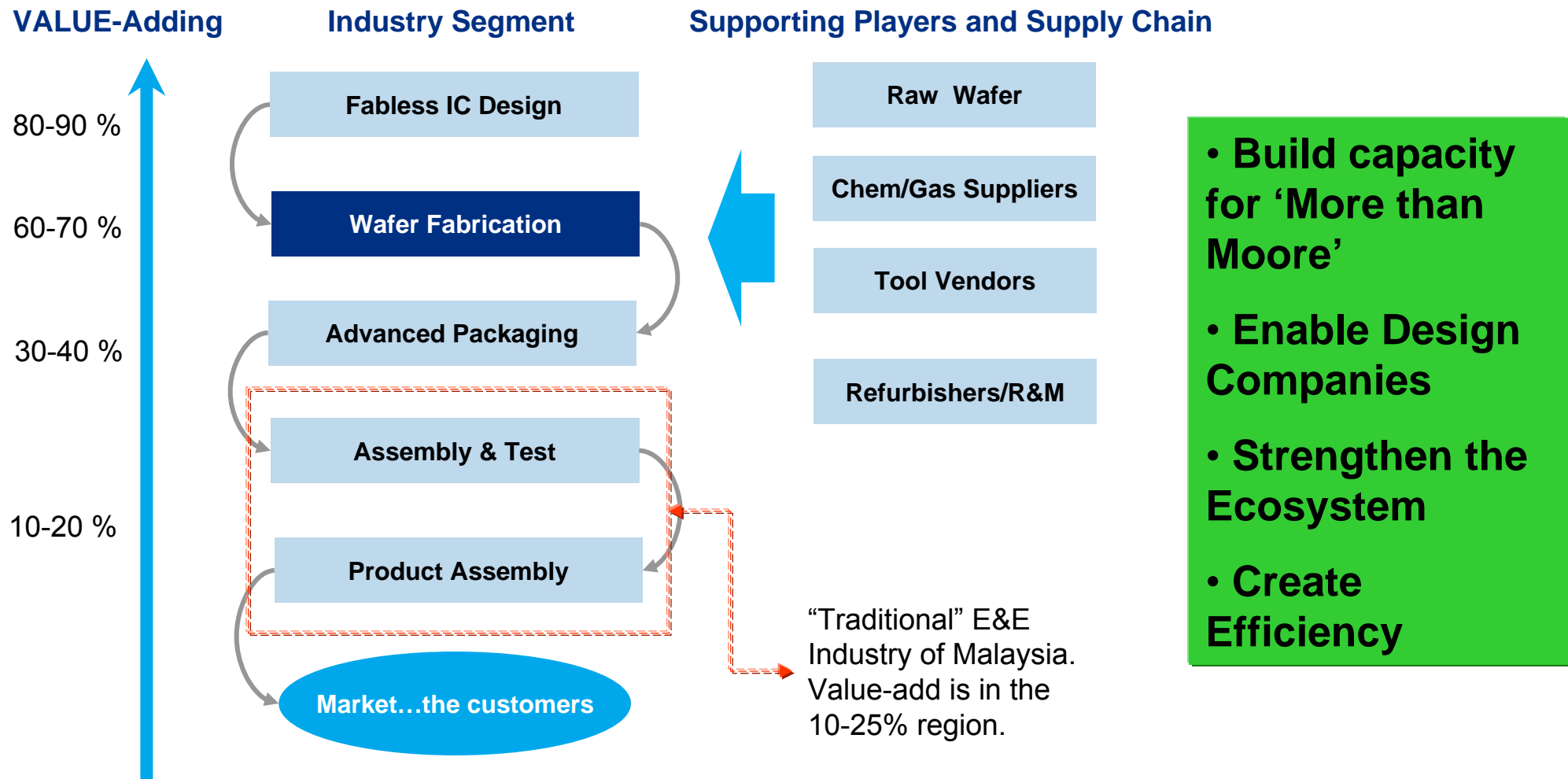
4 Regional Clusters

- Build regional E&E clusters in **Northern Corridor, Klang Valley, Johor and Sarawak**, leveraging on each regions' **unique value** proposition
- Fix **region specific enablers** and **cross-cutting enablers** to create **world-class operating environment**

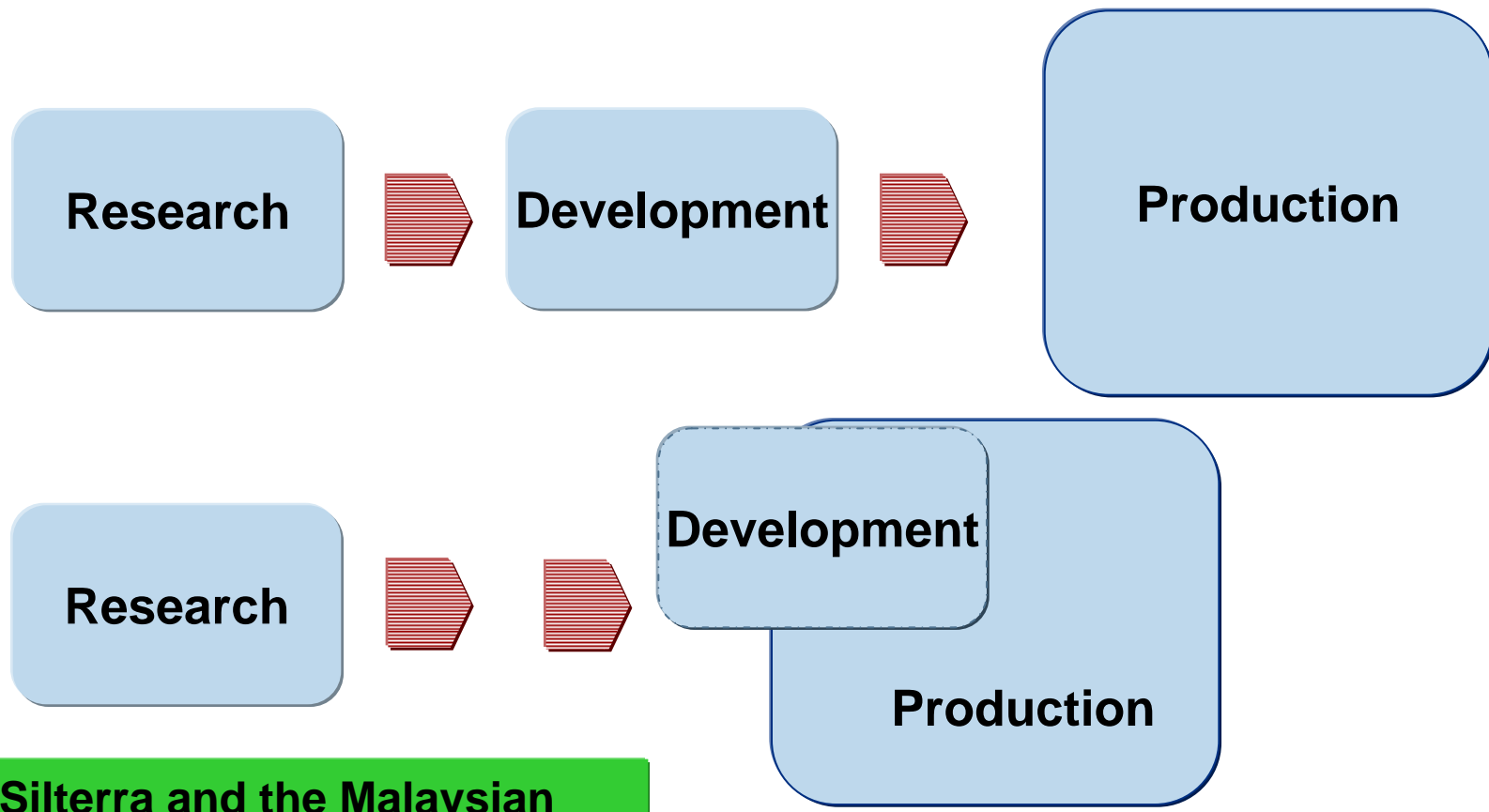
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**\$16B in GNI
by 2020**

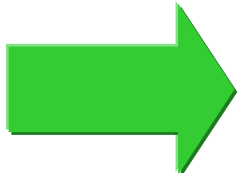
The current on-going efforts are focused on several fronts in the value-chain as well as the supply chains



A transition to an 'open innovation model' is needed.. Where greater and deeper collaboration is required.



- **Silterra and the Malaysian Technical Universities Network (MTUN)**
- **Partnership with IMEC Belgium**



- **Quicker relevance to market requirements**
- **Optimise Resources**
- **Focused National Efforts**

Terima Kasih
