HVM: A Suitable Model for the UK

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http://www.hvm-uk.com

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TWELVE WINDS

High Value Manufacturing (HVM): A definition

A definition;

High Value Manufacturing is where know-how and IP is added to raw materials and components resulting in a manufactured (fabricated) product designed to sell in to global markets

High Value Manufacturers = Rolls Royce, BAe, Ford

High Value (Fabless) Manufacturing (HVFM) is where know-how and IP is added to raw materials and components resulting in a manufactured (fabricated) product designed to sell in to global markets but where manufacturing is not in-house

High Value (Fabless Semiconductor) Manufacturers = CSR, Wolfson, Icera

In contrast, ***low value manufacturing*** does not require rare staff skills or specific geographical location but there is little added value or strategic importance.

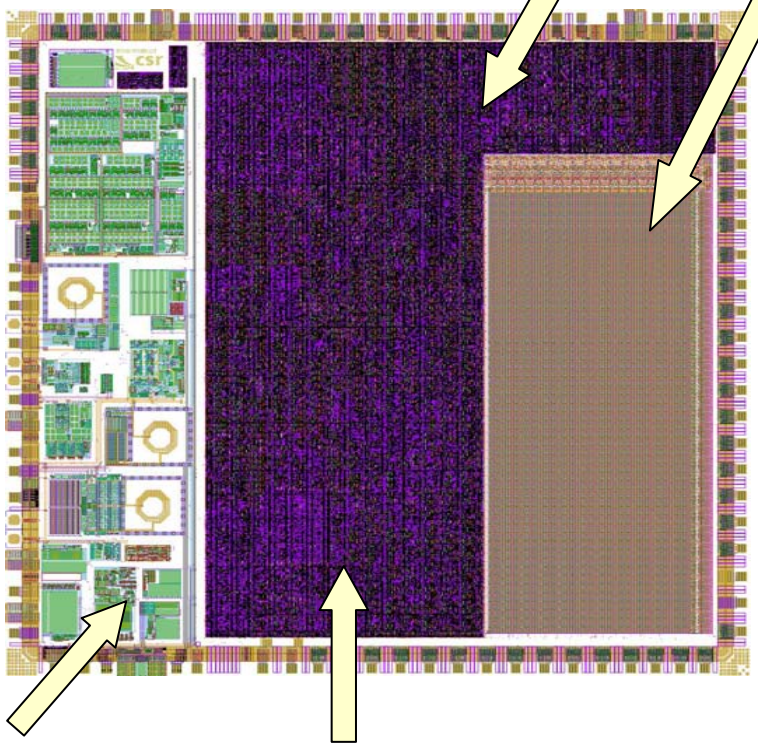
Case study: CSR plc

CSR is a global fabless semiconductor manufacturing business based in Cambridge;

- Raised $85M pre-IPO
- From start-up in April .99 to flotation on the LSE in March .04
- Joined FTSE 250 in July .04
- Global technology brand and Bluetooth market leader
- From 9 founders to more than 1,000 staff across the world
- 2006 revenue of $700M and market cap around $1B
- Shipped more than 1,000,000,000 chips in first 7 years.

BlueCore™: A truly disruptive product

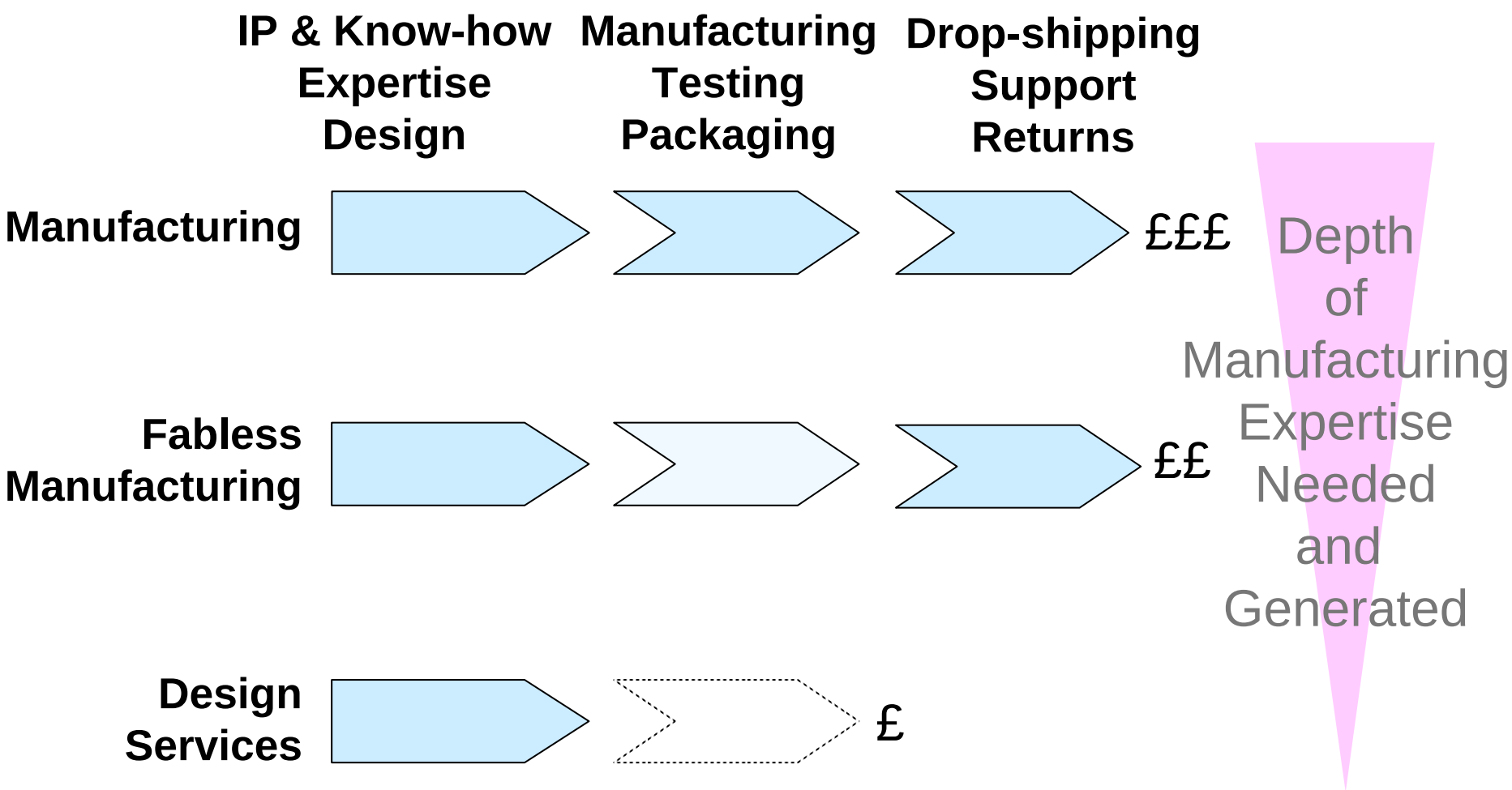
BlueCore™ Single Chip Wireless in CMOS;



Some Design Issues

- Weak analogue and strong digital signals
- On silicon frequency planning
- Uncharacterised CMOS at 2.4GHz
- Very small footprint required
- Package choices:- fpBGA and WLCSP
- Tight hardware / software coupling
- Testability and reprogrammability.

The HVM business model



HV Fabless Manufacturing (HVFM)

The HV Fabless Manufacturing model is not for the faint-hearted;

standard (not custom) product comfort zone

Entry Barriers	Right Product	Survival & Success Factors
Raising enough cash	Industry standards	IP management
Design for test and manufacture	Driving legislation	Apps engineers
Gaining attention of fabs	Market need	Design partners
Right first time design	Innovative design	Driving down GPM
		Being in the manufacturing loop
		Developing multiple product families

Most fabless (semiconductor) manufacturing companies fail because they underestimate **entry barriers** and **survival & success** factors.

HV Fabless Manufacturing benefits to the UK

Why has HVFM succeeded in the UK;

- Educated workforce
- Attractive place to live
- Manufacturing legacy
- Attractive tax regime for entrepreneurs ?

Benefits that HVFM companies provide UK plc include;

- Jobs
- Tax revenue
- Generation and retention of IP and manufacturing expertise.

Increasing the UK HVM base

What can be done to encourage HVM in the UK ?

Education:

- Schools (teach computing)
- Universities (more blue sky research, less development)
- Fraunhofer Institutes (link universities to industry)

Tax for start-ups:

- Simple, founder & staff-friendly and stable

Industry and government:

- Patent treaty enforcement
- Brand anchoring
- Government UK purchasing policy
- National industrial strategy ?

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