

a.k.a.
Challenges in
Why do not all microfluidics
commercialization of
entrepreneurs drive around in
microfluidics-enabled products
Ferraris

Holger Becker



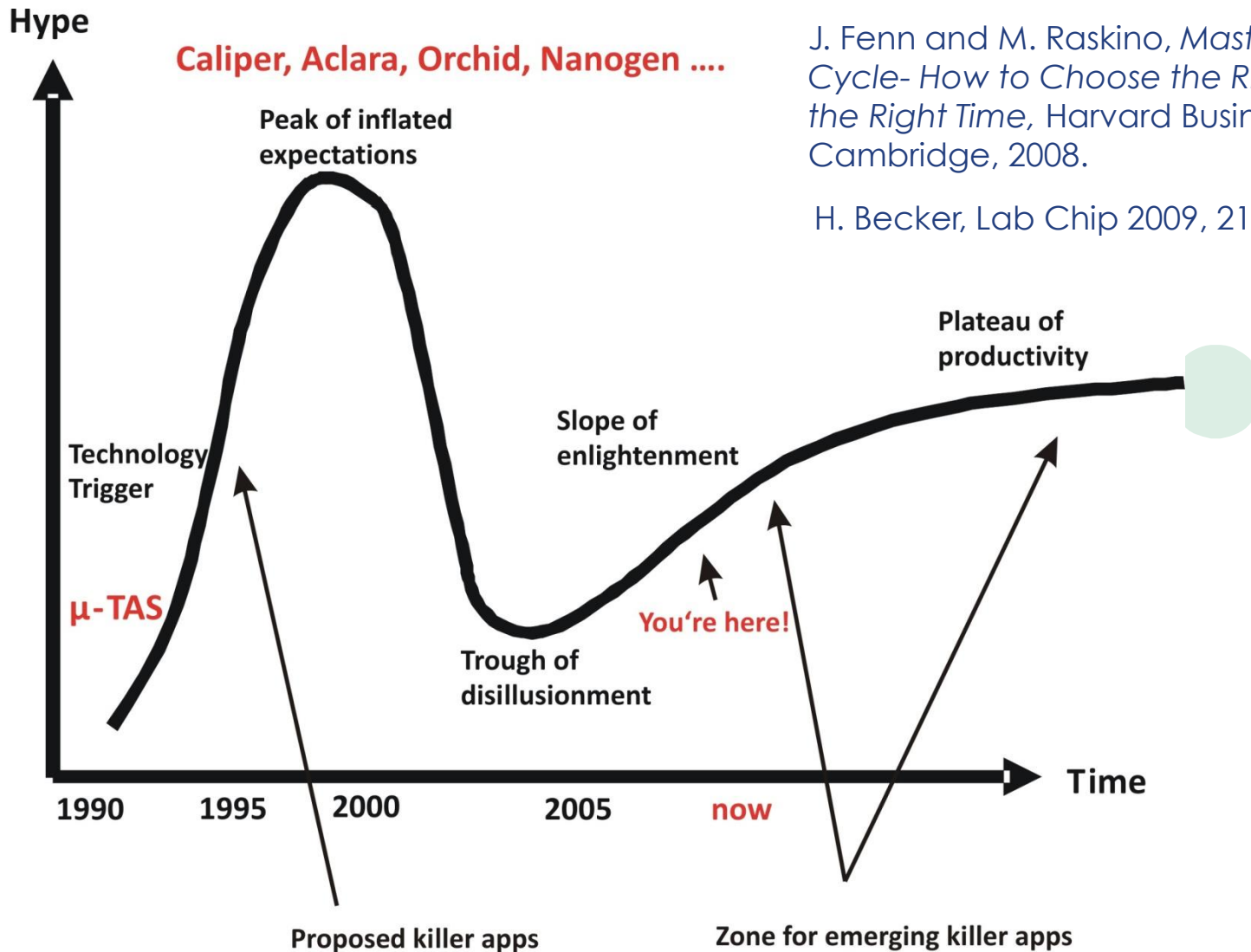
The question!

Why did it take so long for microfluidics to become integral part of life science/diagnostic product development?



1. Prediction on market sizes and timing are always REALLY difficult

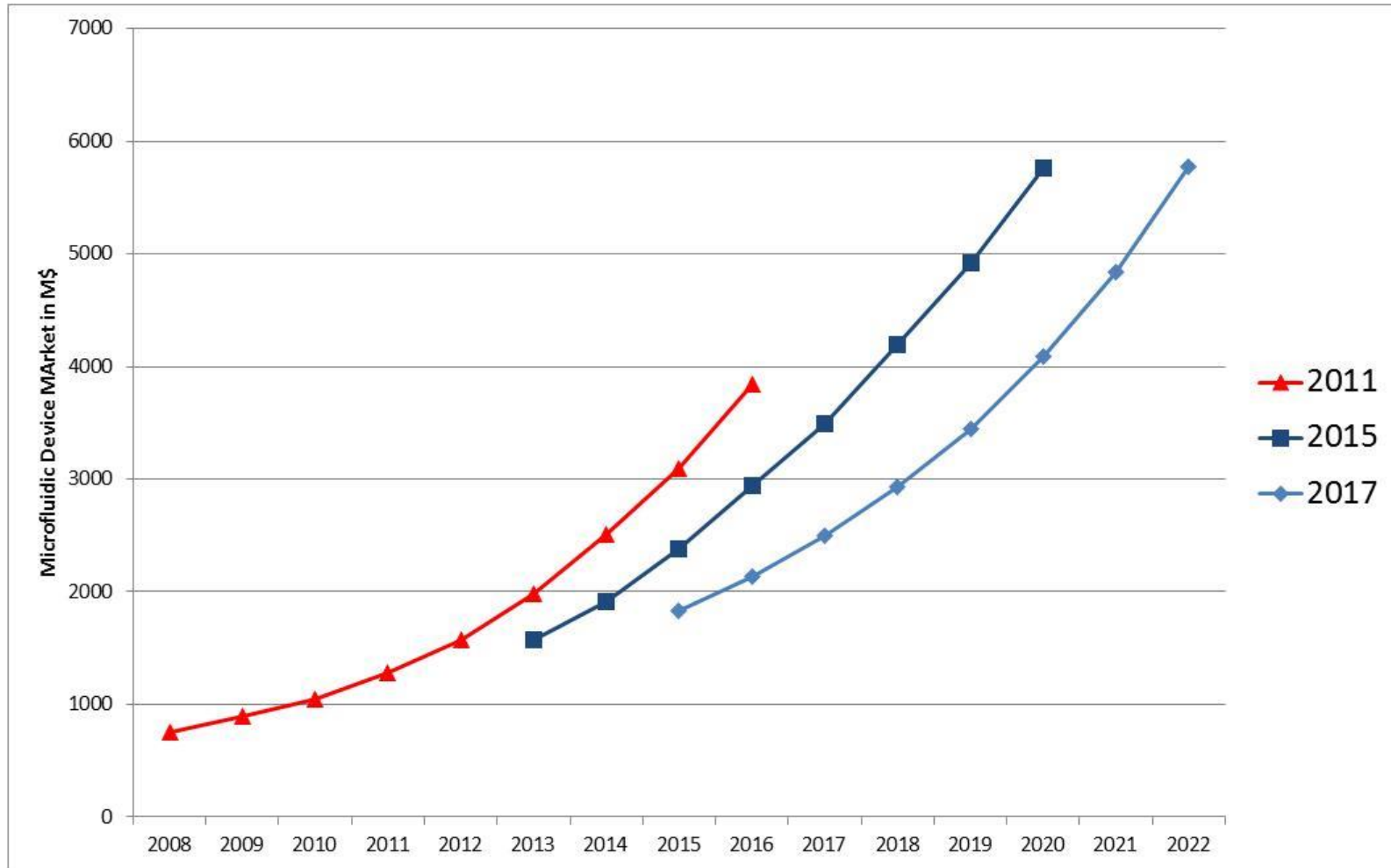
Gardner Hype-Cycle



J. Fenn and M. Raskino, *Mastering the Hype Cycle- How to Choose the Right Innovation at the Right Time*, Harvard Business Press, Cambridge, 2008.

H. Becker, *Lab Chip* 2009, 2119-2122

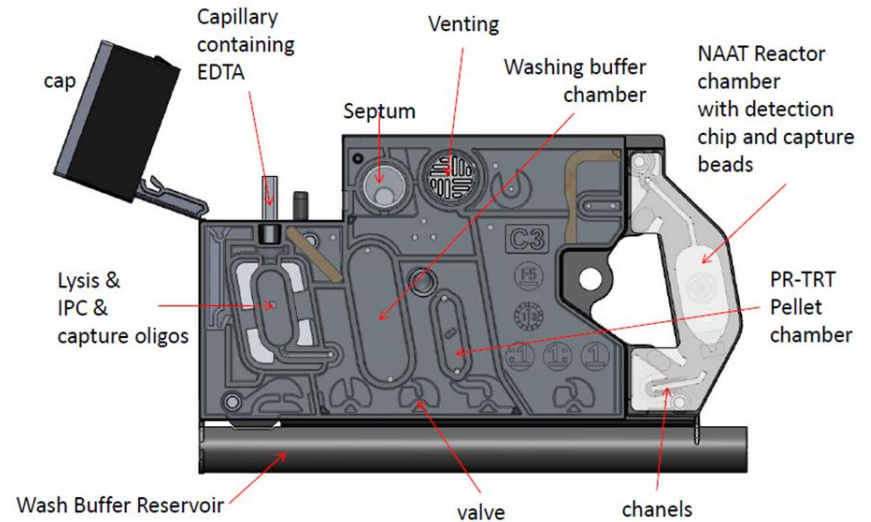
Market predictions



Market data on microfluidic device markets. All numbers from Yole Developpement

2. There is a disconnect between academic research and industrial needs

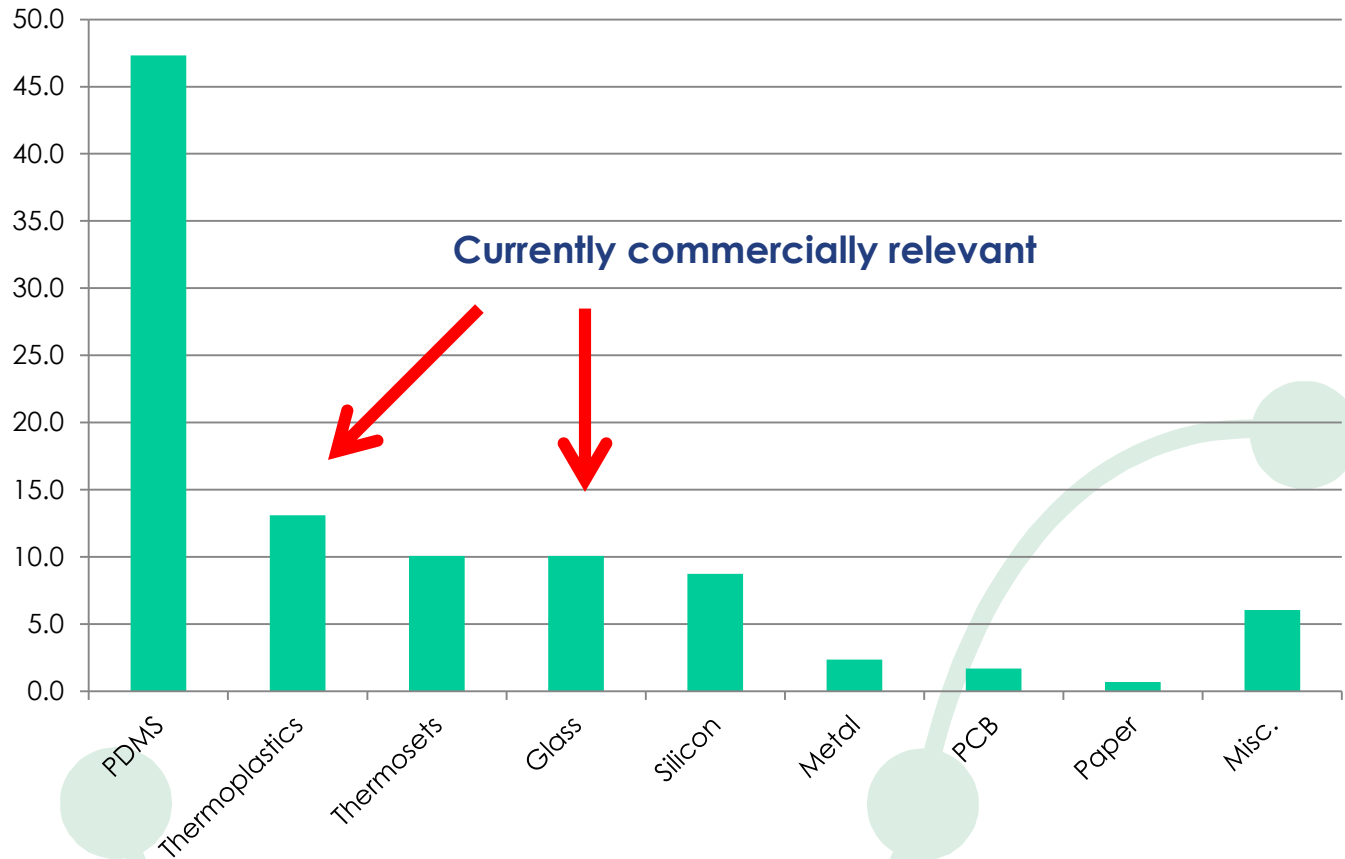
Compare this.....to this



Source: Synvivo

Source: Alere Technologies

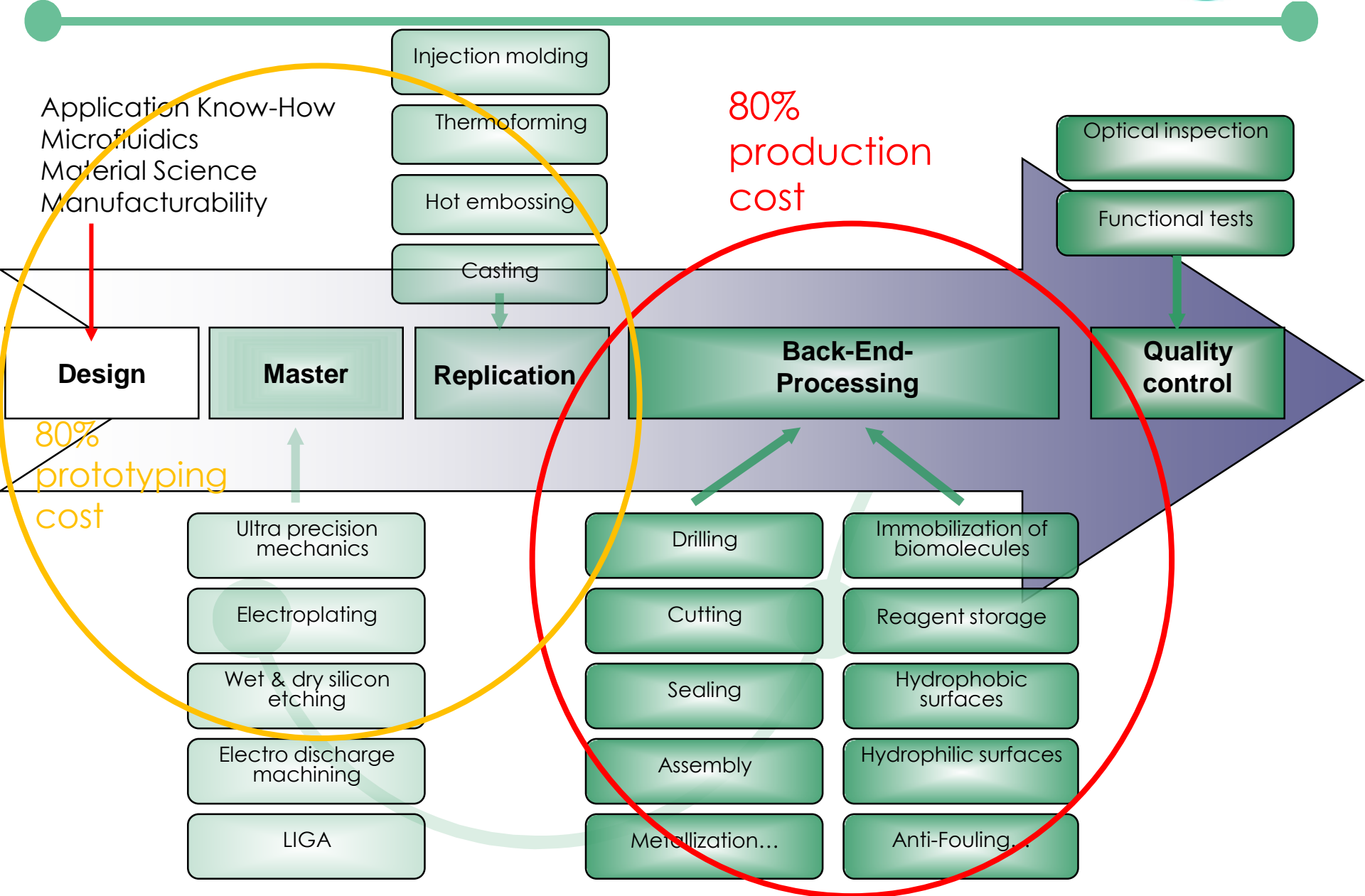
Mind the gap!



Relative frequency in % of materials used in Lab-on-a-Chip publications between September 2009 and September 2010.

H. Becker, C. Gärtner, Science Progress (2012), 95(2), 175-198

The Technology Chain



- **Microfluidics is an attractive market!**
- **Market predictions are difficult**
- **Microfluidics currently experiences a dramatic increase in commercialization but the killer app will need more time**
- **Microfluidics needs attention from both the technical as well as the business side**
- **There is a significant disconnect between the academic work and industrial need**
- **There are sufficient challenges left!**

...it's hard to predict killer apps.....

