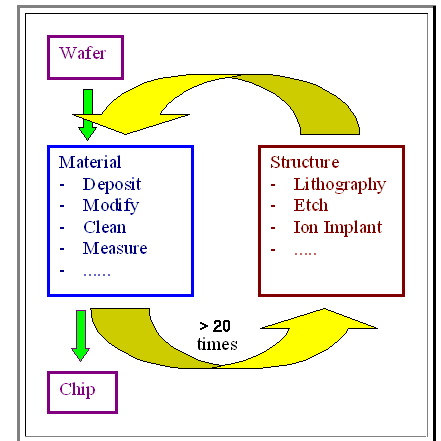


### 5.2.3 Summary to: Chips on Wafers

- Typical wafer size for new factories (2007) : **300 mm** diameter, **775  $\mu\text{m}$**  thickness, flatness in lower  **$\mu\text{m}$**  region
  - Chip size a few  **$\text{cm}^2$** , much smaller if possible
  - Yield **Y** = most important parameter in chip production = % of chips on a wafer that function (= can be sold).
  - Y = 29 %** is a good value for starting production
- Chip making = running about **20** times (roughly!!) through "materials" - "structuring" loop.
  - About **400 - 600** individual processing steps (= in / out of special "machine") before chip is finished on wafer
  - More than **30** processing steps for packaging (after separation of chips by cutting)
  - Simple estimate: **99.9%** perfection for each processing step means **Y < 70 %**.



### Questionnaire

Multiple Choice Questions to 5.2