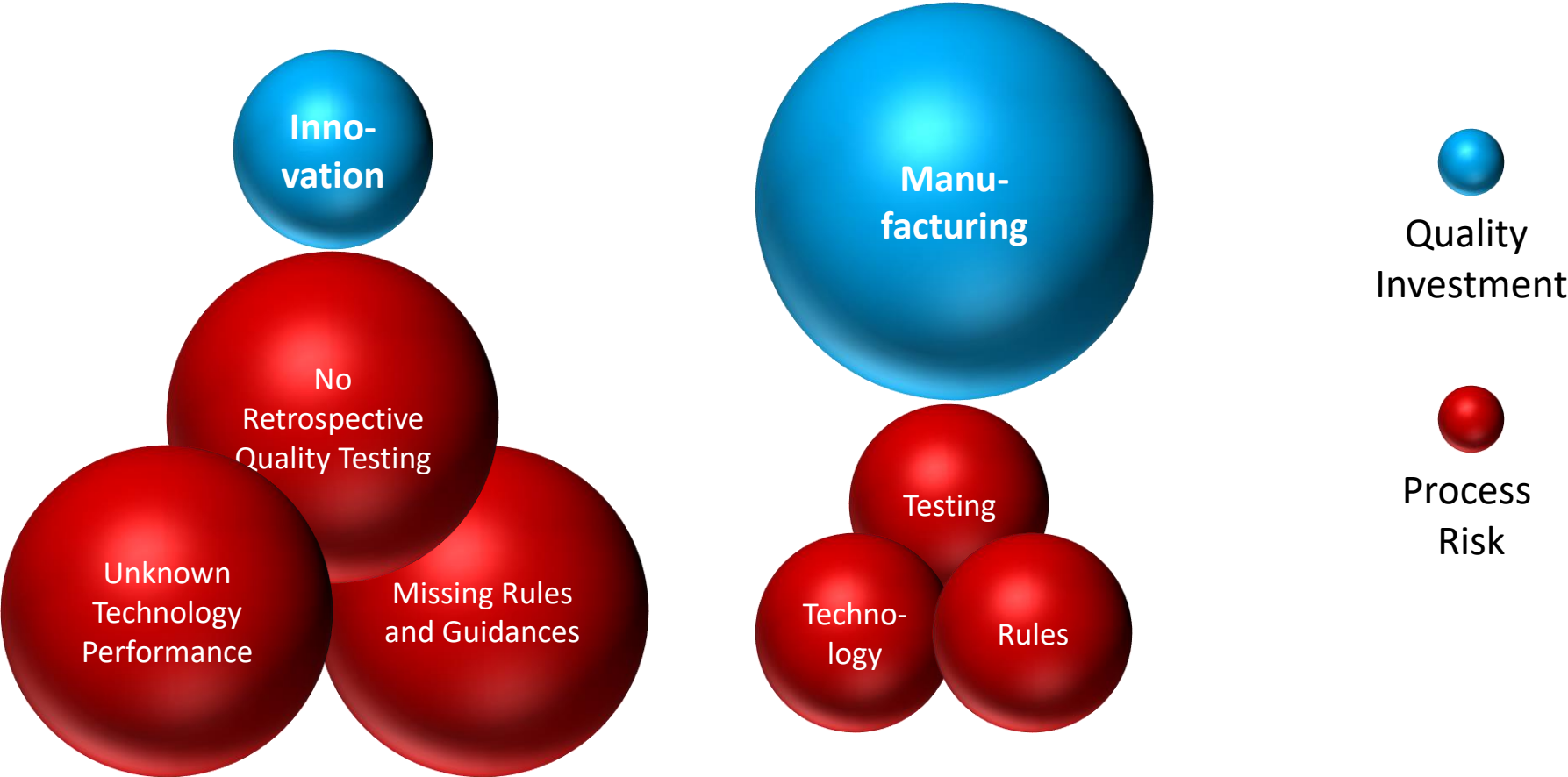


Innovation Quality – Part 1

The Innovation Quality Paradox

- Innovation receives less quality support than manufacturing
 - even though process risks are higher, technologies are less established and mistakes and errors are harder to identify
- Investment in Innovation Quality
 - saves resources when smartly done
 - significantly improves innovation performance
 - significantly increases company success
- **Innovation Quality makes or breaks Management success.**

Quality Imbalance



Innovation vs. Manufacturing I

- Manufacturing process
 - delivers well defined products
 - specified by measurable parameters
 - Process results can be tested retrospectively
- Innovation process
 - delivers data or values
 - interpreted in the context of a hypothesis
 - Process results cannot be tested retrospectively
- **Missing option for retrospective quality testing is a strong argument for built-in Innovation Quality.**

Innovation vs. Manufacturing II

- Manufacturing process
 - is usually well established
 - is running within defined limits
 - is known to deliver products within specifications
- Innovation process
 - frequently uses new and untested technologies or
 - uses established technologies in a new set up
 - with unknown performance in the given set up
- **Unclear technology performance is a strong argument for built-in Innovation Quality.**

Innovation Quality Paradox I

- Manufacturing processes are
 - frequently regulated by authorities
 - always regulated by company specific rules
 - supported by significant quality resources
- Innovation processes are
 - never regulated by authorities
 - rarely regulated by company specific rules
 - supported by limited quality resources
- **Established Manufacturing receives far more quality support than harder to control Innovation.**

Innovation Quality Paradox II

- Manufacturing Quality has a strong external impact
 - Safety of the customer
- Innovation Quality has a strong internal impact
 - improved innovation performance
 - generates competitive advantages
 - generates company success
 - generates management success
- **External quality impact triggers significant investments.**
Internal quality impact triggers – not a lot.

Impact I – False Negatives

- Innovation results NOT MATCHING expectations
 - maybe “true” negatives – correct and reliable
 - justifiably killing hypothesis and innovation
 - maybe “false” negatives – incorrect and unreliable
 - killing hypothesis and innovation without need
- Innovation Quality prevents false negatives
 - thus avoiding costly repetitions and project death
- **Avoiding repetitions. Avoiding death of projects. Innovation Quality saves money.**

Impact II – False Positives

- Innovation results MATCHING expectations
 - maybe “true” positives – correct and reliable
 - justifying further investments in the hypothesis
 - maybe “false” positives – incorrect and unreliable
 - wrongly triggering further investments
- Innovation Quality prevents false positives
 - thus avoiding wrong investments
- **Avoiding wrong investments.**
Innovation Quality saves money.

Innovation Quality Paradox

- Innovation should receive sufficient quality support
 - since process related risks are high
 - since mistakes and errors are hard to identify
 - since technology performance is unclear
 - since investments in quality save resources
 - since Innovation performance has significant impact on company and management success
- **Lack of Investment in Innovation Quality is indeed a Paradox.**

Innovation Quality is not a Top Management Topic. An attitude coming with personal risk to management. More later on.