Reflex workshop

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Evolving system boundary

C — Common learning system boundary (market) across the energy system boundaries.

B — Technology learning system boundary, 1 | Technology learning system boundary, 2

A — Manuf./Niche market 1 | Manuf./Niche market 2
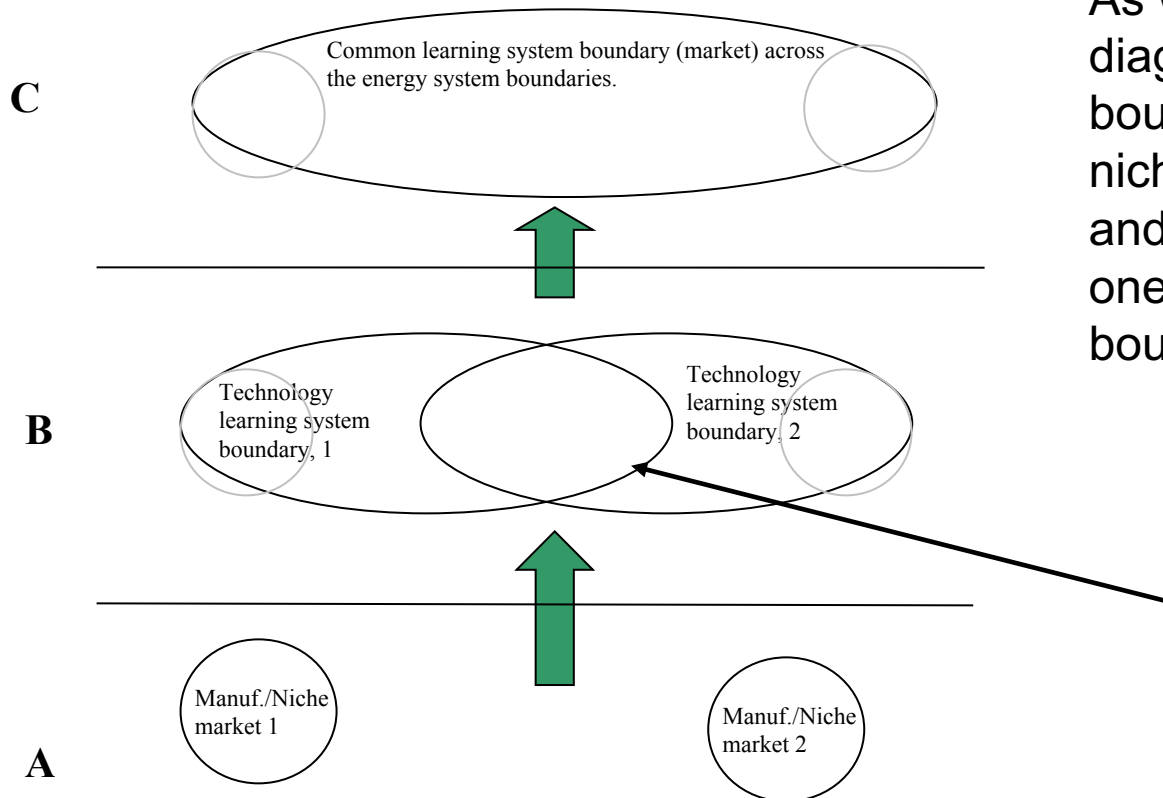
As we move up in the diagram the system boundaries of parallel niche markets overlap and eventually become one (global) system boundary
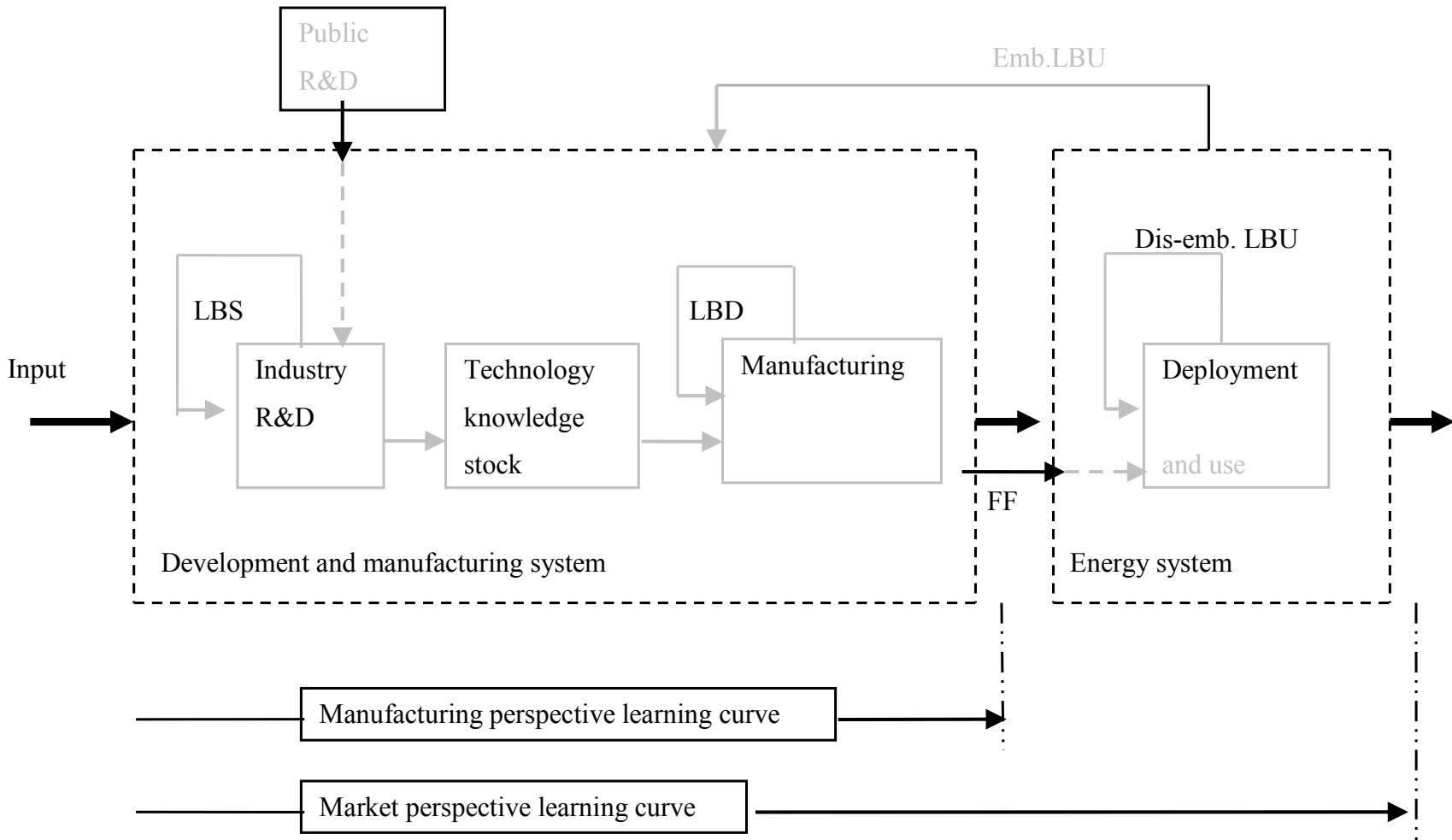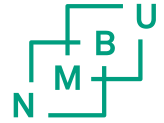
Kilde: Martinsen 2011

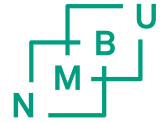# Spillover - schematic flow diagram
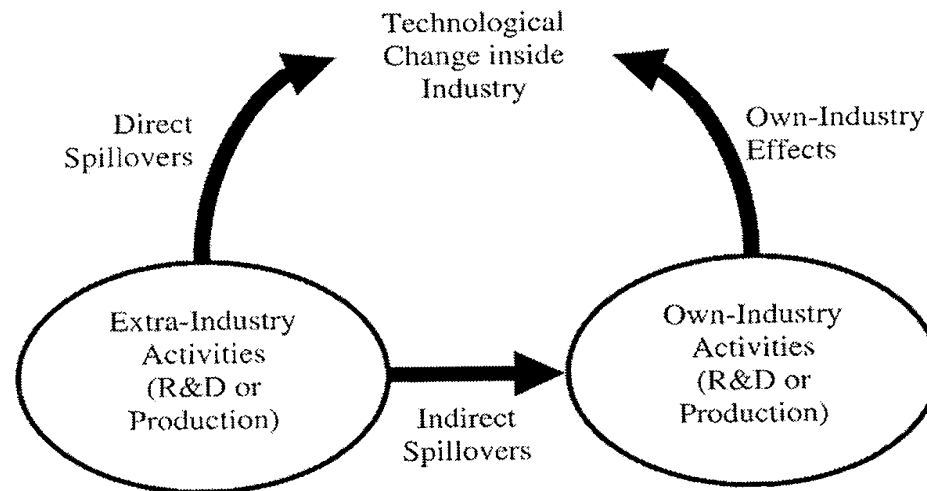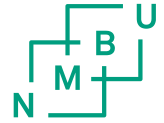
(Clarke et al. 2006)

What may be the influence of artifical intellegence?
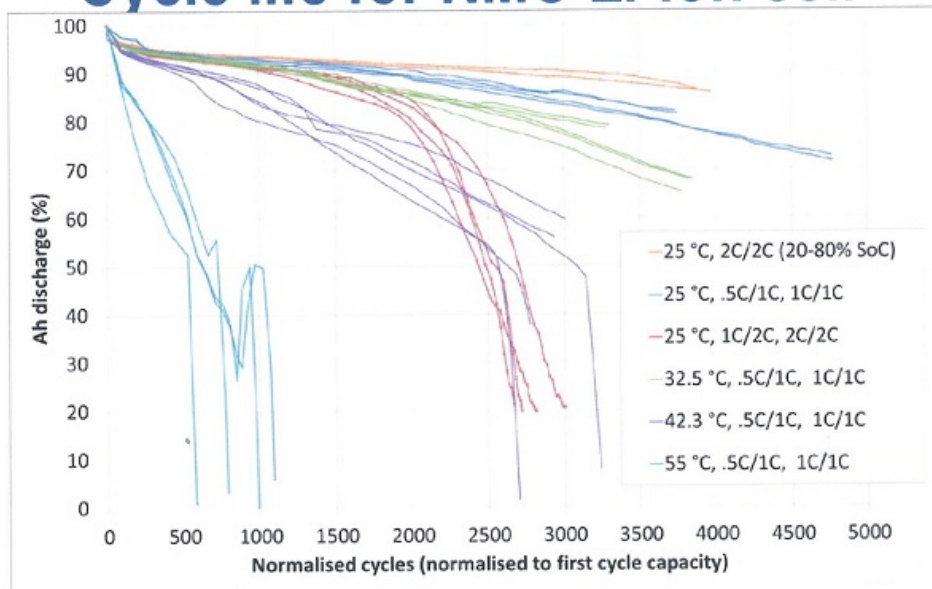
System boundaries and feedback mechanisms

Source: Martinsen 2009, Based on figure 2.2 and 2.9 in IEA (2000), figure 2.3 and 3.1 in Neij et al. (2003).
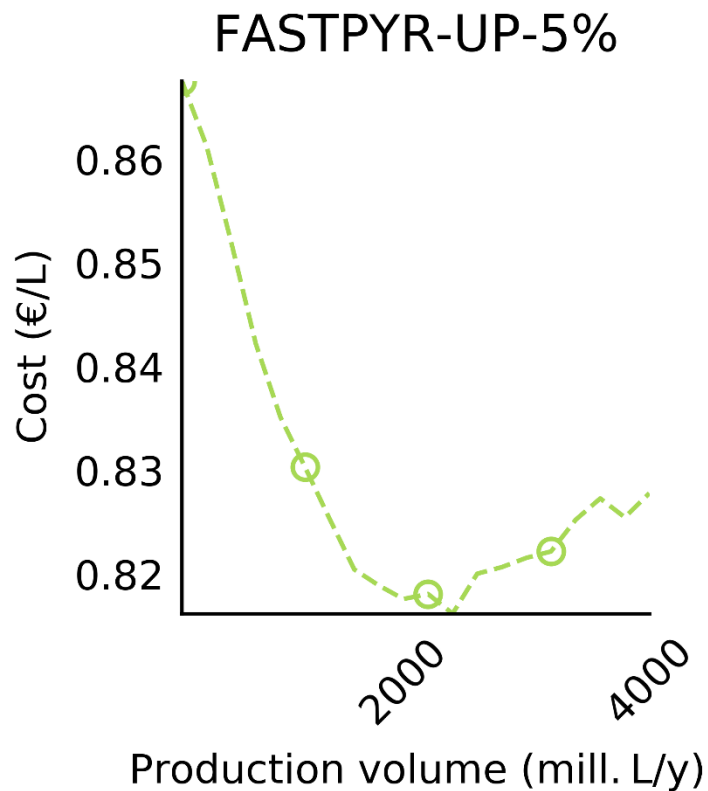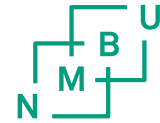
Battery degradation

Cycle life for NMC Li-ion cell

Ah discharge (%) vs. Normalised cycles (normalised to first cycle capacity)

Legend:
- 25 °C, 2C/2C (20-80% SoC)
- 25 °C, .5C/1C, 1C/1C
- 25 °C, 1C/2C, 2C/2C
- 32.5 °C, .5C/1C, 1C/1C
- 42.3 °C, .5C/1C, 1C/1C
- 55 °C, .5C/1C, 1C/1C

Source: Vie (2015)
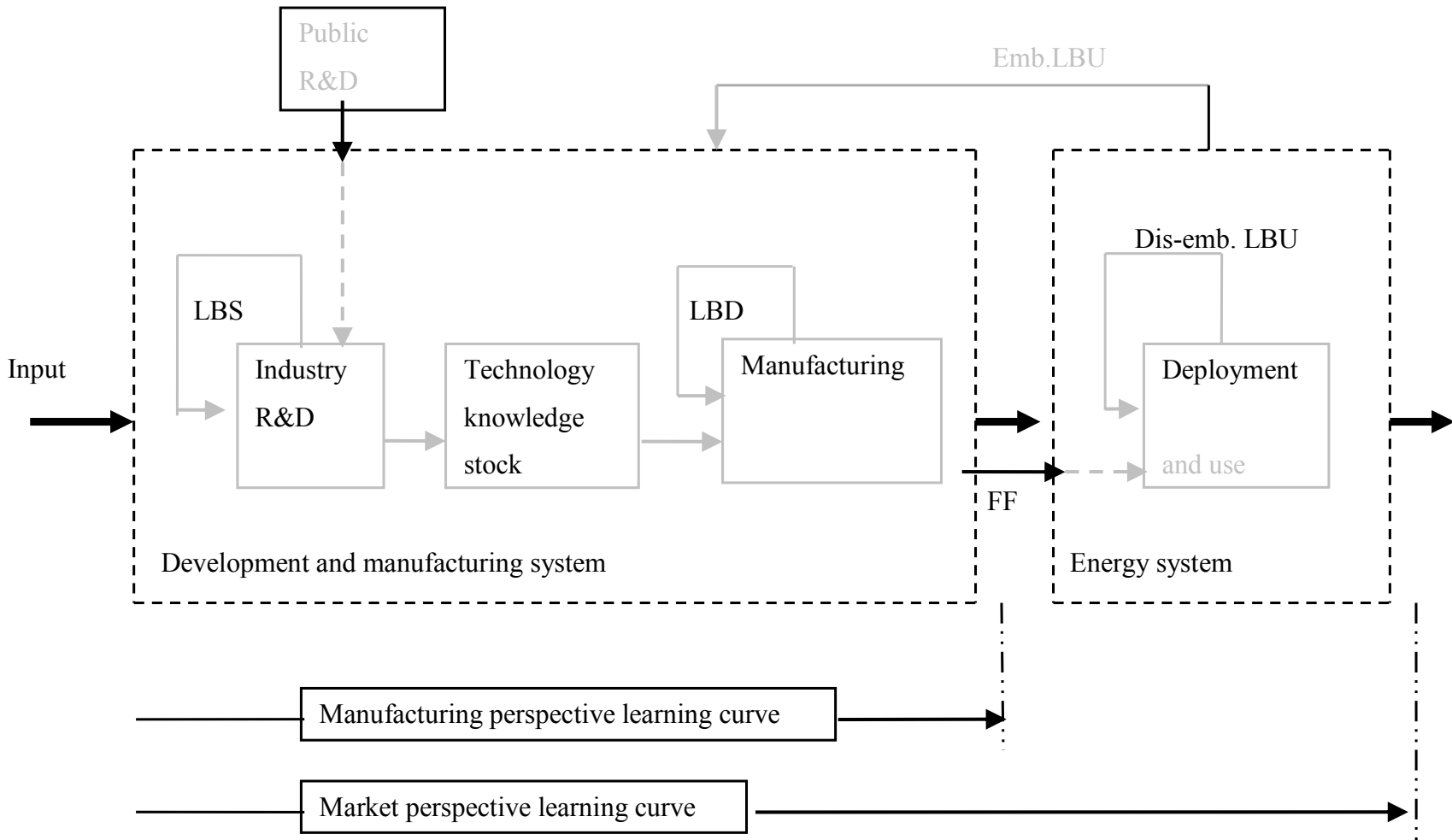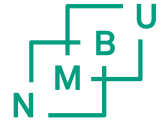Institute for Energy Technology

Experience versus increasing feedstock market price

FASTPYR-UP-5%

Balance between learning in production and increased cost because of rising feedstock cost.

Source: Mustapha et. al. 2017

System boundaries and feedback mechanisms

Source: Martinsen 2009, Based on figure 2.2 and 2.9 in IEA (2000), figure 2.3 and 3.1 in Neij et al. (2003).

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