

LEAN and A3 Approach to Supporting Processes

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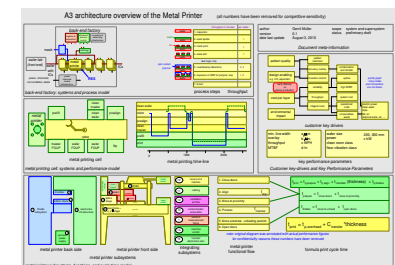
Abstract

LEAN product development is in the process and means area pragmatic. Low tech tools, such as paper, pen and magnets, with very direct interaction are used. For communication the use of single A3-size documents is promoted, because this is a manageable amount of information.

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Characteristics of LEAN

A holistic, systems approach to product development including people, processes, and technology .

Multi-disciplinary from the early start, with a drive to be fact based.

Customer understanding as the the starting point.

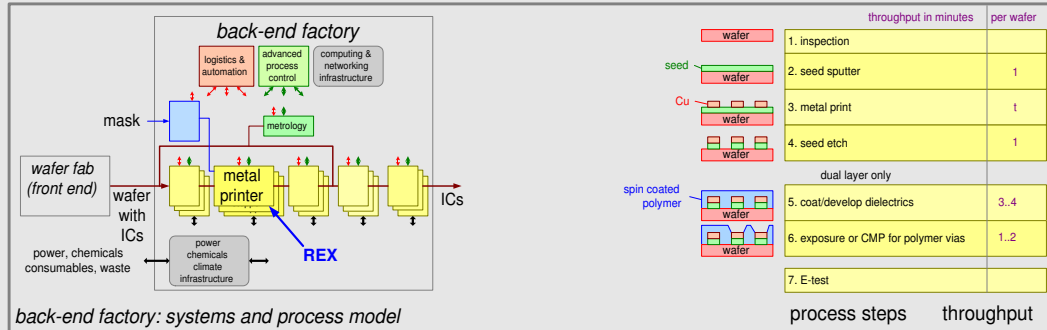
Continuous improvement and learning as cultural value .

Small distance between engineers and real systems, including manufacturing, sales and service and the system of interest.

Example of A3 Architecture Overview

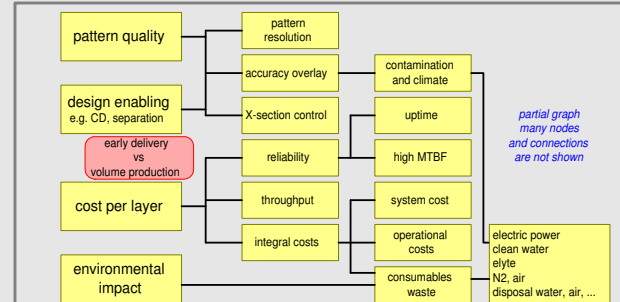
A3 architecture overview of the Metal Printer

(all numbers have been removed for competitive sensitivity)



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Document meta-information

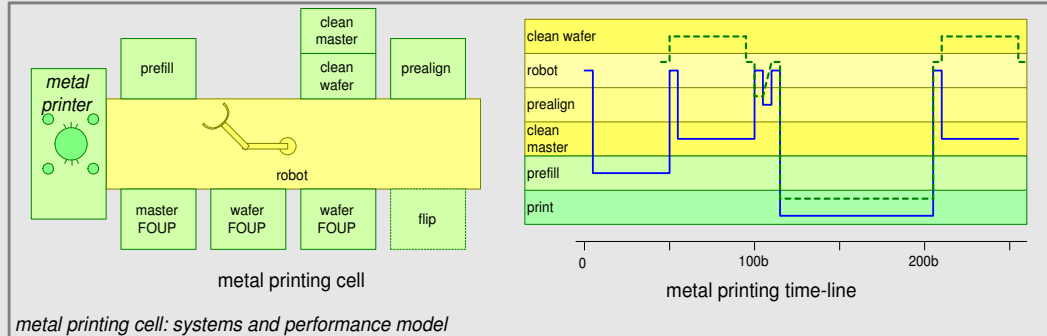


customer key drivers

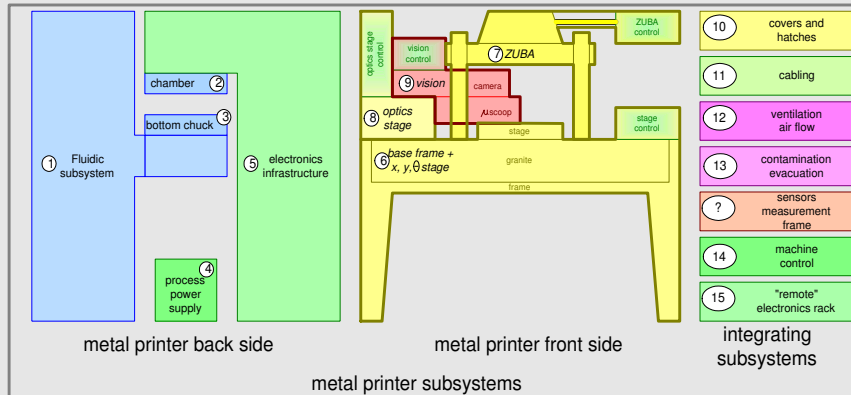
min. line width	a μm	wafer size	200, 300 mm
overlay	b μm	power	x kW
throughput	c WPH	clean room class	
MTBF	d hr	floor vibration class	

key performance parameters

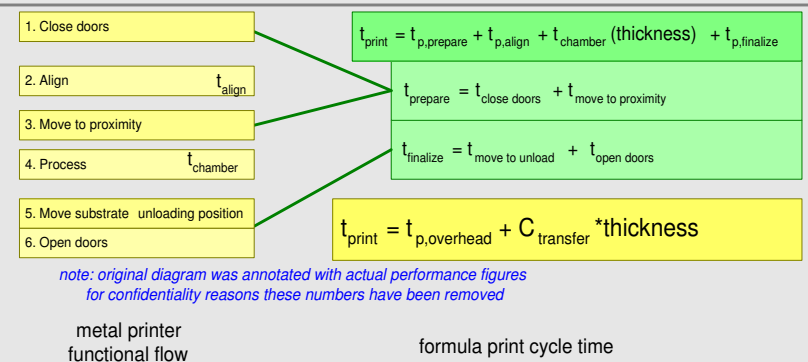
Customer key-drivers and Key Performance Parameters



metal printing cell: systems and performance model



metal printer subsystems, functions, and cycle time model



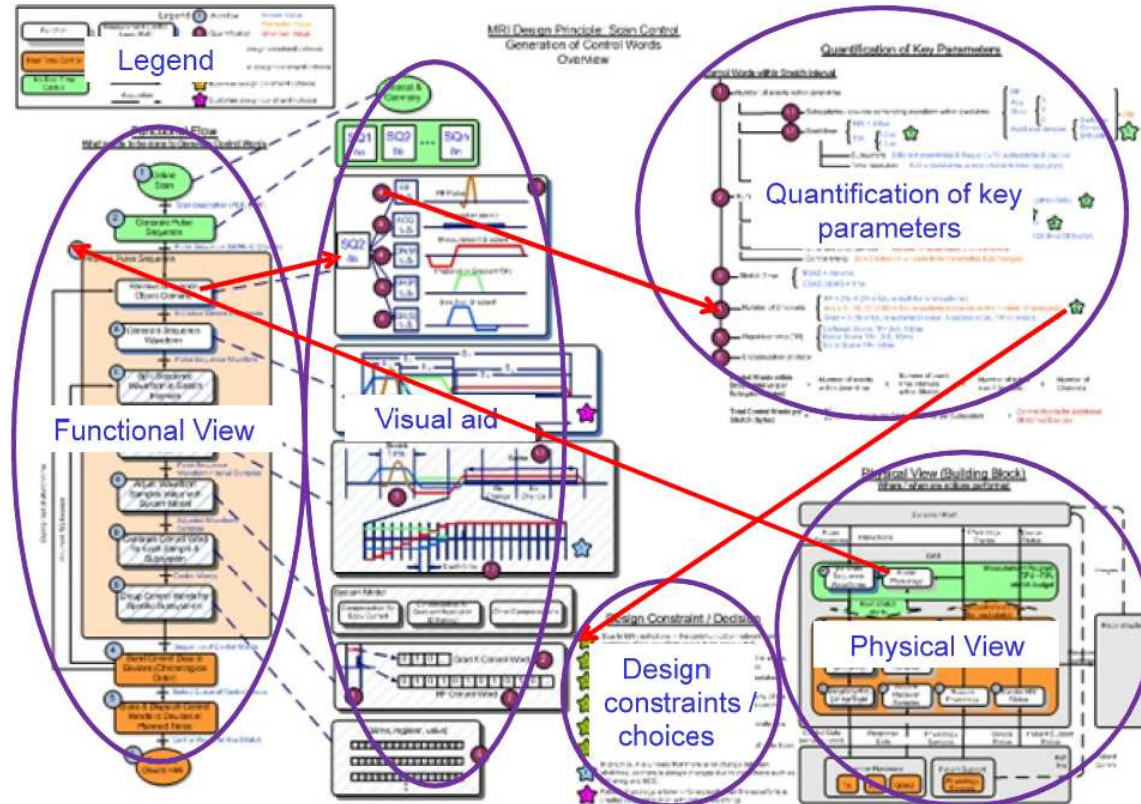
note: original diagram was annotated with actual performance figures for confidentiality reasons these numbers have been removed

multiple related views

quantifications

one topic
per A3

capture
"hot" topics



source: PhD thesis Daniel Borches <http://doc.utwente.nl/75284/>

digestible
(size limitation)

practical
close to stakeholder experience