Balancing Genericity and Specificity

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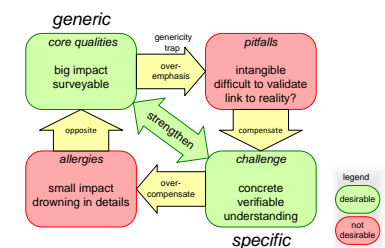
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Abstract

The balance between generic and specific architecting methods is discussed. The output of the architect must be compact and hence generic, but this output is based on many specific details which have been taken into account.
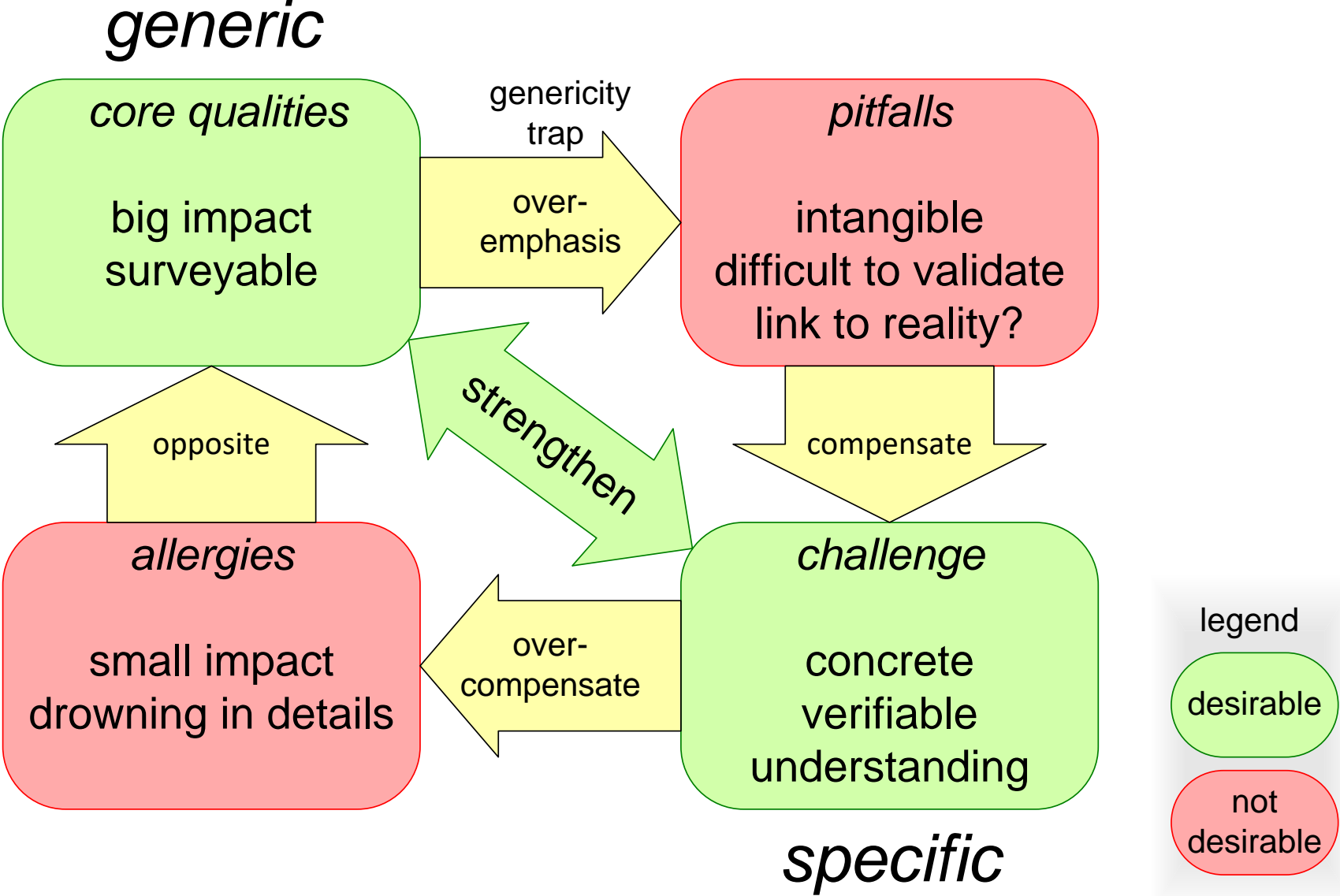
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status: finished
version: 1.2

Strong and weak of generic and specific

generic

core qualities

big impact
surveyable

genericity
trap

over-emphasis

pitfalls

intangible
difficult to validate
link to reality?

opposite

strengthen

compensate

allergies

small impact
drowning in details

over-compensate

challenge

concrete
verifiable
understanding

specific

legend

desirable

not desirable

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Generic diagrams are based on specific details

Figure 15.5
SW processes
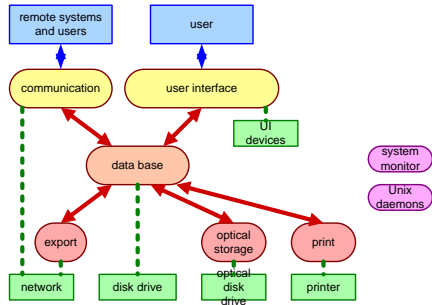
Figure 15.1
image quality context
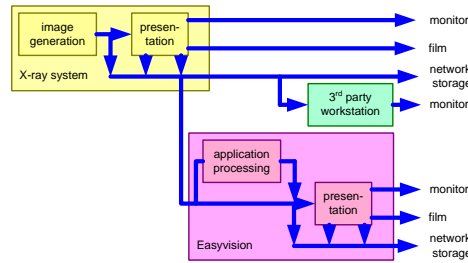
Figure 15.8
memory budget

memory budget in Mbytes	code	obj data	bulk data	total
shared code	11.0			11.0
UI process	0.3	3.0	12.0	15.3
database server	0.3	3.2	3.0	6.5
print server	0.3	1.2	9.0	10.5
DOR server	0.3	2.0	1.0	3.3
communication server	0.3	2.0	4.0	6.3
UNIX commands	0.3	0.2	0	0.5
compute server	0.3	0.5	6.0	6.8
system monitor	0.3	0.5	0	0.8
ASW total	13.4	12.6	35.0	61.0
UNIX Solaris 2.x				10.0
file cache				3.0
total				74.0

Figure 15.7
construction decomposition
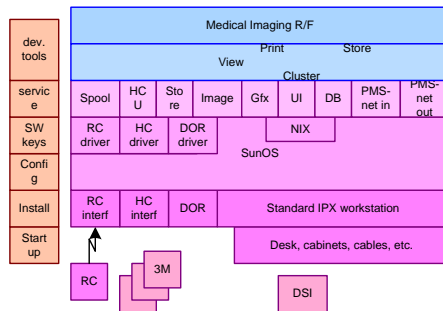
high level, generic diagrams:
large impact, providing overview

Figure 15.2
processing pipeline
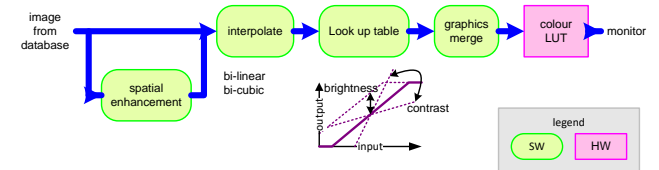
every block, number of word is based on hundreds of specific
design details (loc, measurements, images, connections, etc.)

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Architecting method: supporting the balance

level of detail, see figure 7.3

1

generic: provide overview

| **C**ustomer objectives | **A**pplication | **F**unctional | **C**onceptual | **R**ealization |

10^3

thread of reasoning: integration by fast iteration

story ← analyse design → use case ← analyse design → partial design

10^6

specific: link to reality via facts

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