NG PI Planning #4

Lightning Talk: Highways, Parking Lots, and Making Dependencies Visible,

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SEI Continuous Deployment of Capability Directorate

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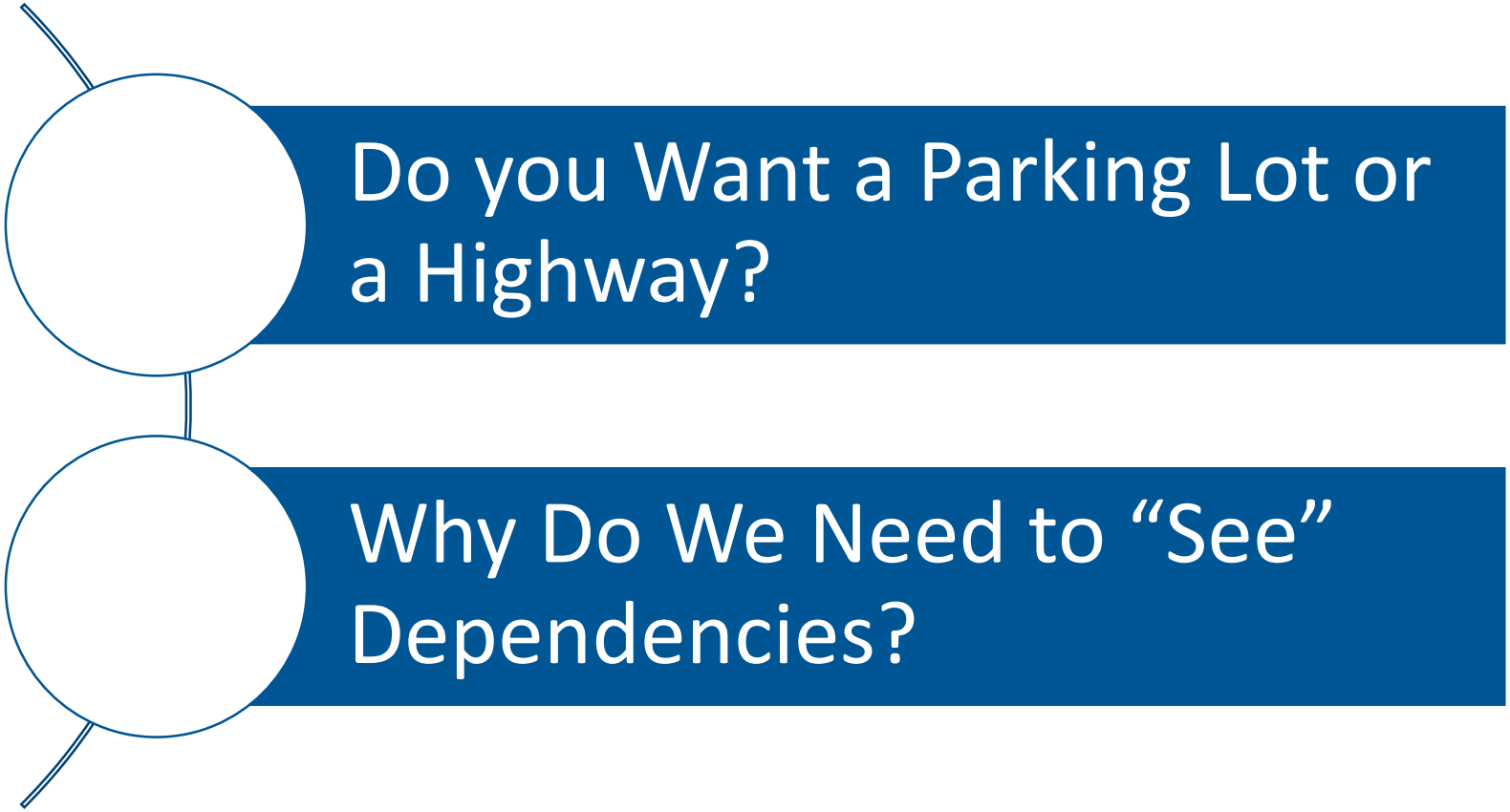
REALLY Quick Agenda



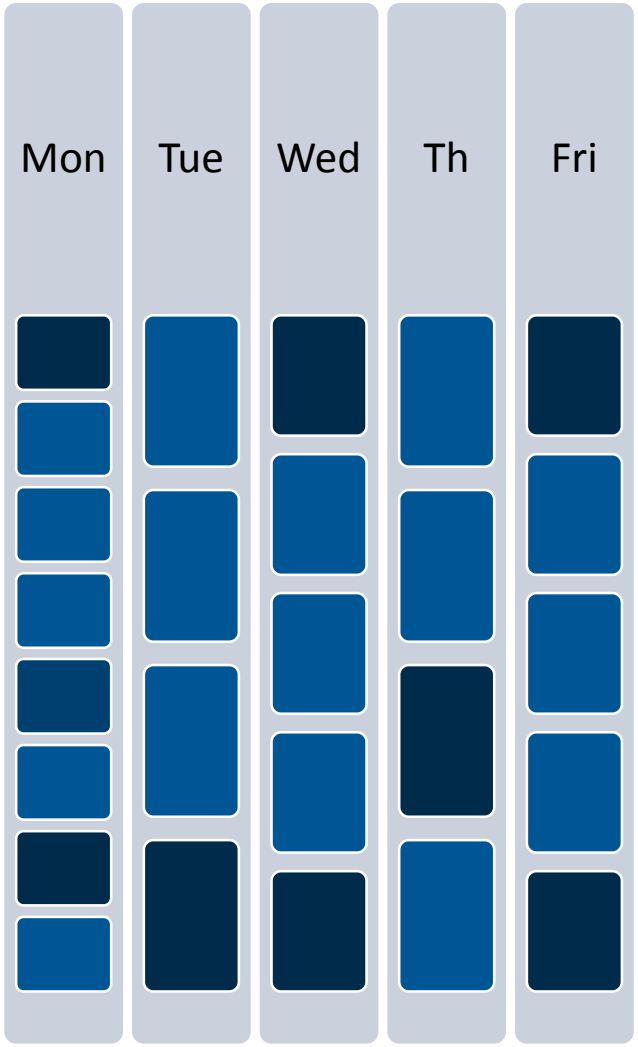
How We Wish the World Worked

But It Doesn't!

This Is The World We Live/Work in

We need to preserve options, and to do that, we need capacity to pivot!

Packing Scheduled Tasks is Prone to Risk



100% Utilization:

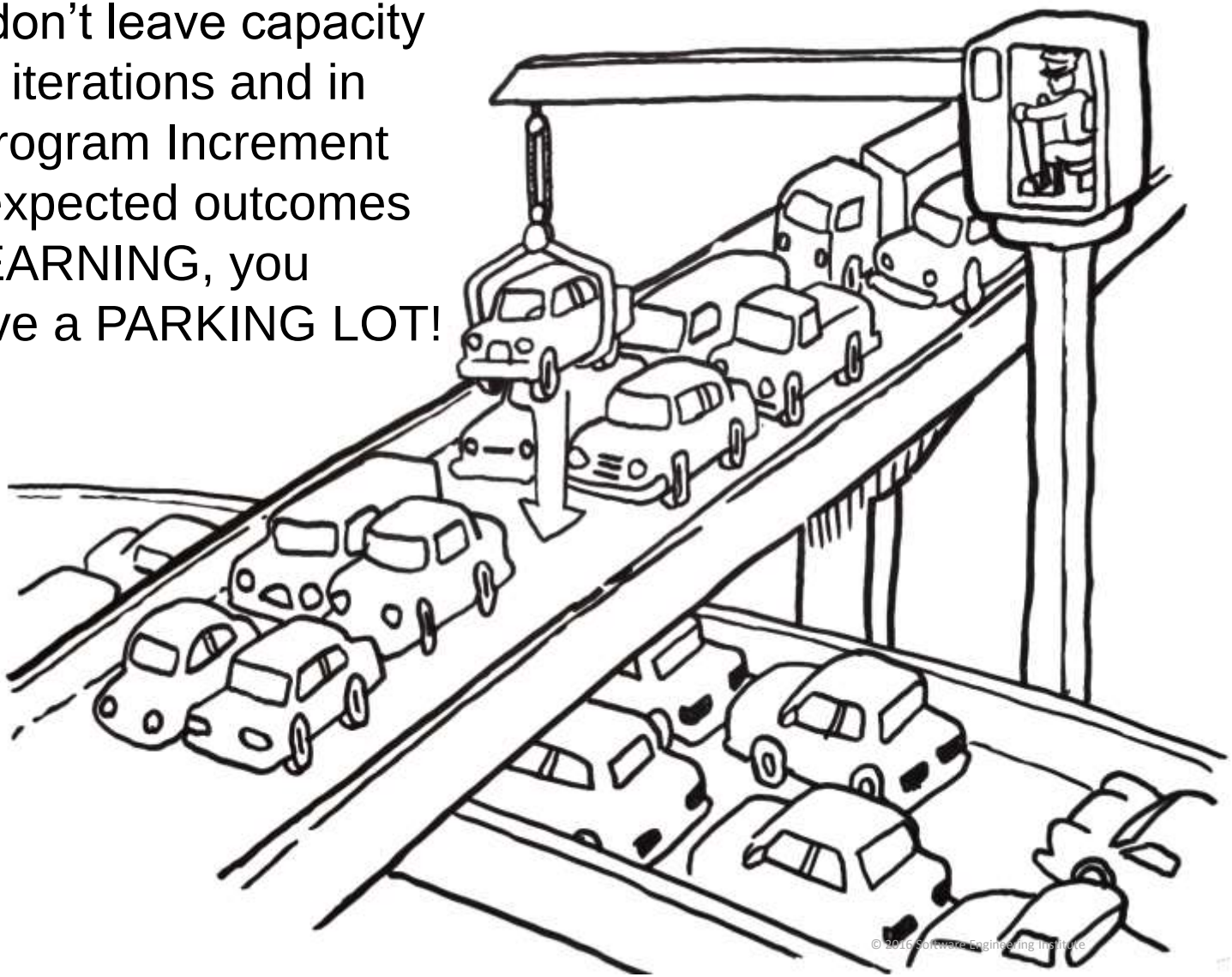
- *Magnifies* the impact of variation
- *Maximizes* task-switching *overhead*
- Assures slower overall progress

Change is inevitable, plan to learn

Multi-tasking is a myth we don't accurately comprehend—it's really task-switching, and it's costly!

Do You Want a Highway or a Parking Lot?

If you don't leave capacity in your iterations and in your Program Increment for unexpected outcomes and LEARNING, you will have a PARKING LOT!

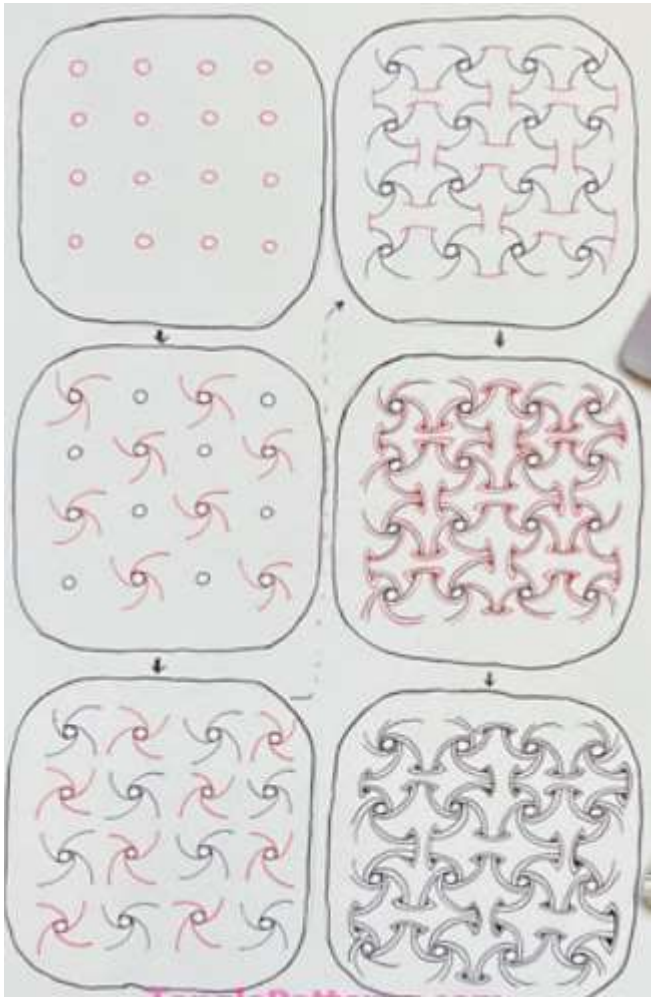


Why Do We Need to “See” Dependencies?

If I told you this is a straightforward design *that I drew in six steps,* how many of you could do it just from the drawing?

(my first time drawing this design; nope, not perfect, but learning isn’t about perfection!)

Making Dependencies Explicit Allows Complexity to be Dealt With



Not too difficult to draw, once you know the dependencies! (honest!)

To learn how to draw this pattern, watch
https://youtu.be/N5bZg1ah9Yc

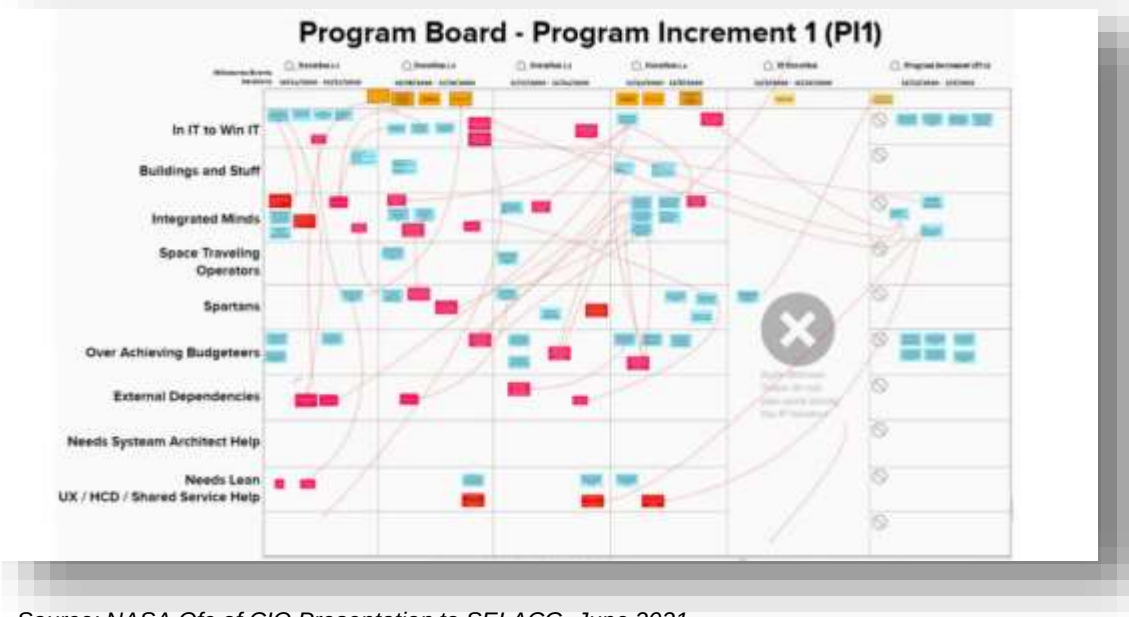
Other Benefits of Visible Dependencies

We can make the feasibility of our near term plans more visible – if we need to pivot, it's obvious!

We know where we need to learn more/faster

We know where there are likely to be defects (interface defects are often the hardest to find)

We can collaborate more directly – instead of waiting, we can be proactive in looking for opportunities to pool resources and skills to achieve desired outcomes



Source: NASA Ofc of CIO Presentation to SEI ACG, June 2021

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BACKUPS

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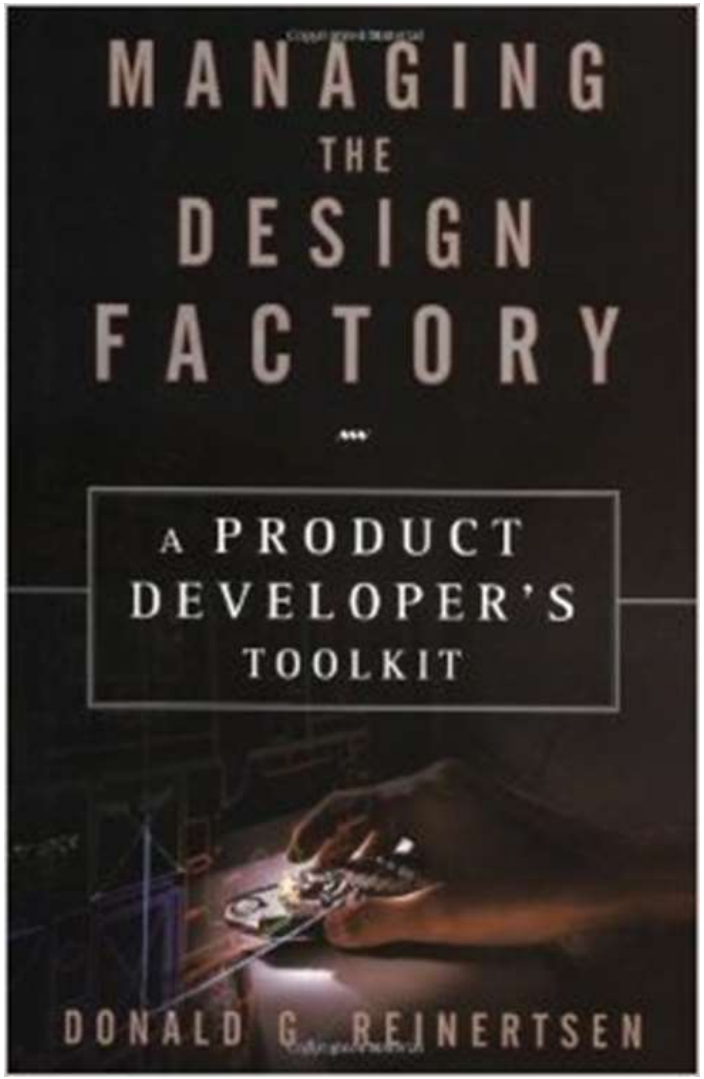
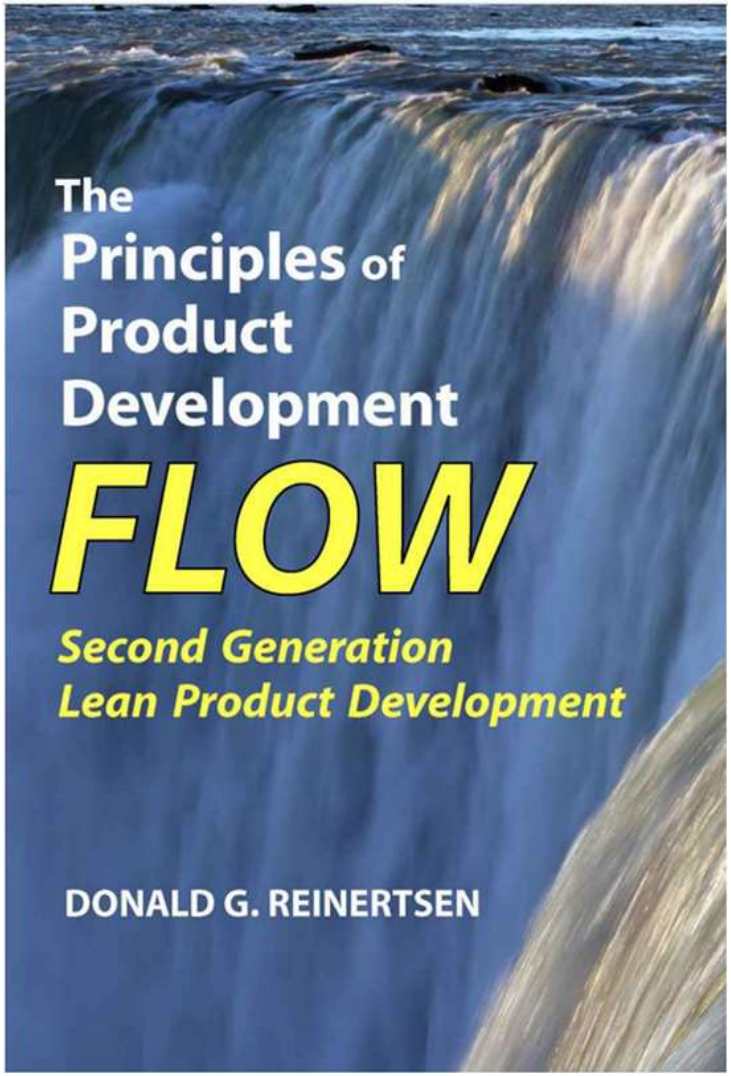
Reference Books





Build Incrementally with Fast, Integrated Learning Cycles

Hone the approach as we iterate

Build from initial minimum result to robust conclusions

Plan to learn & pivot to increase value of outcomes

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