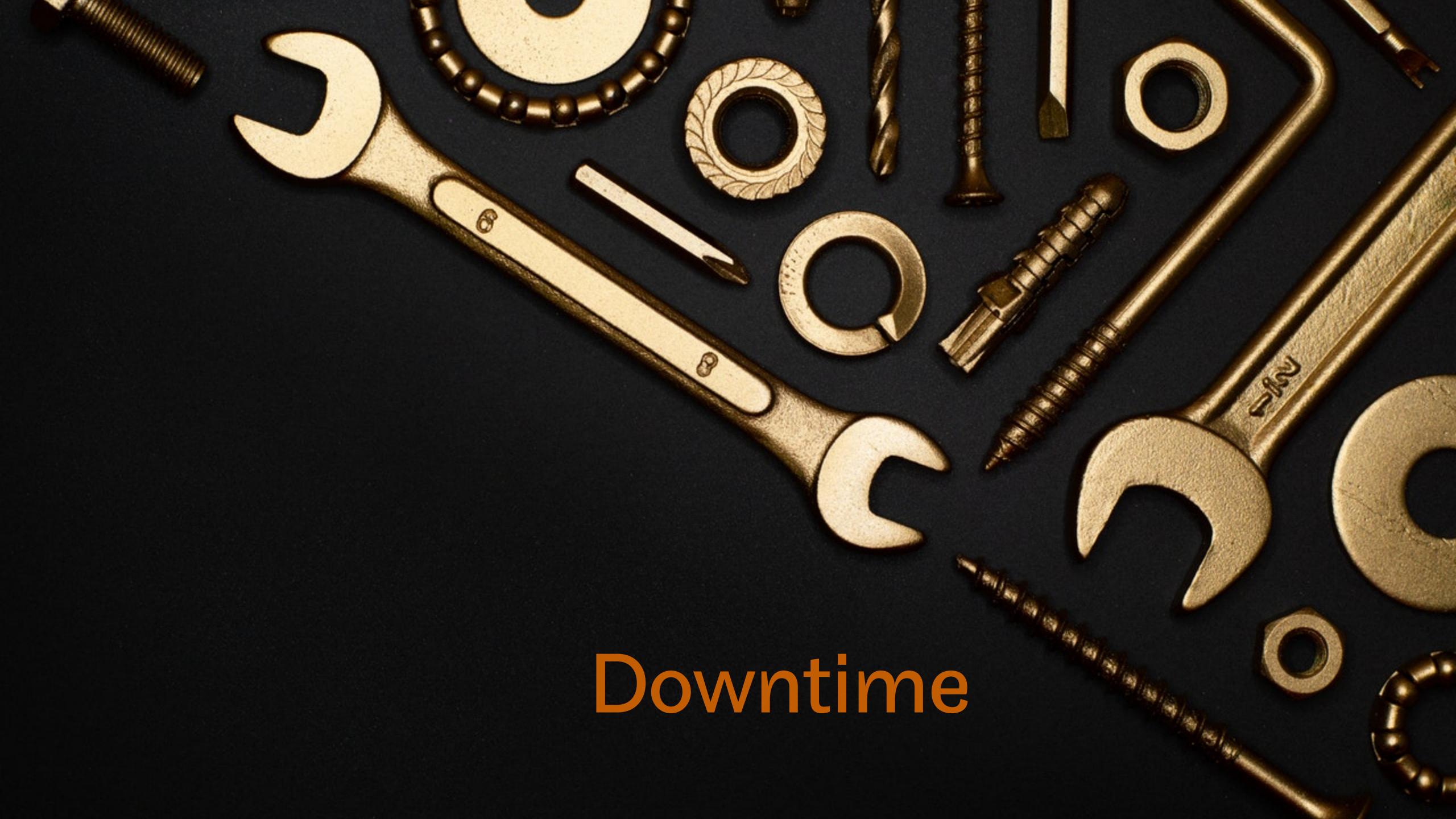
Fred Schenkelberg Reliability and Maintenance





Reliability # of failures



What is the right balance?

Availability







Definition(s) Availability

The ratio of uptime over total time how do you define availability?



Perfect Reliability Availability

Let's say we have a system with perfect reliability...

would we need maintenance?



Perfect Maintenance Availability

Let's say we have a system with perfect maintenance

Would we need a reliable system?



How does design

impact reliability?

System Design & Reliability







Function focus

System design and reliability

Design something that provides value

This includes a lot of trade-offs



Time to failure

System design and reliability

Part of the design process is:

thinking about when and how something will fail



Failure mechanisms System design and reliability

In order to resolve how a system fails, the design team needs some understanding of the mechanisms



How does design

impact maintainability?







Uptime focus

System design & maintenance

'get the system running'

Take steps to minimize downtime



Time to repair

System design & maintenance

A common metric

and one governed to some extent by the system's design



Replace/Repair Units

System design & maintenance

Instead of mechanisms

what is not working and let's replace/repair that element



What does design need

to get the balance right?

Design for maintenance is a two way process.

Thanks

see more at AccendoReliability.com