Service Ownership

Learn Faster

Holly Allen
she/her
@hollyjallen

slack

Holly Allen

Software development and leadership for 19 years

BioTrove

18F

PLOS

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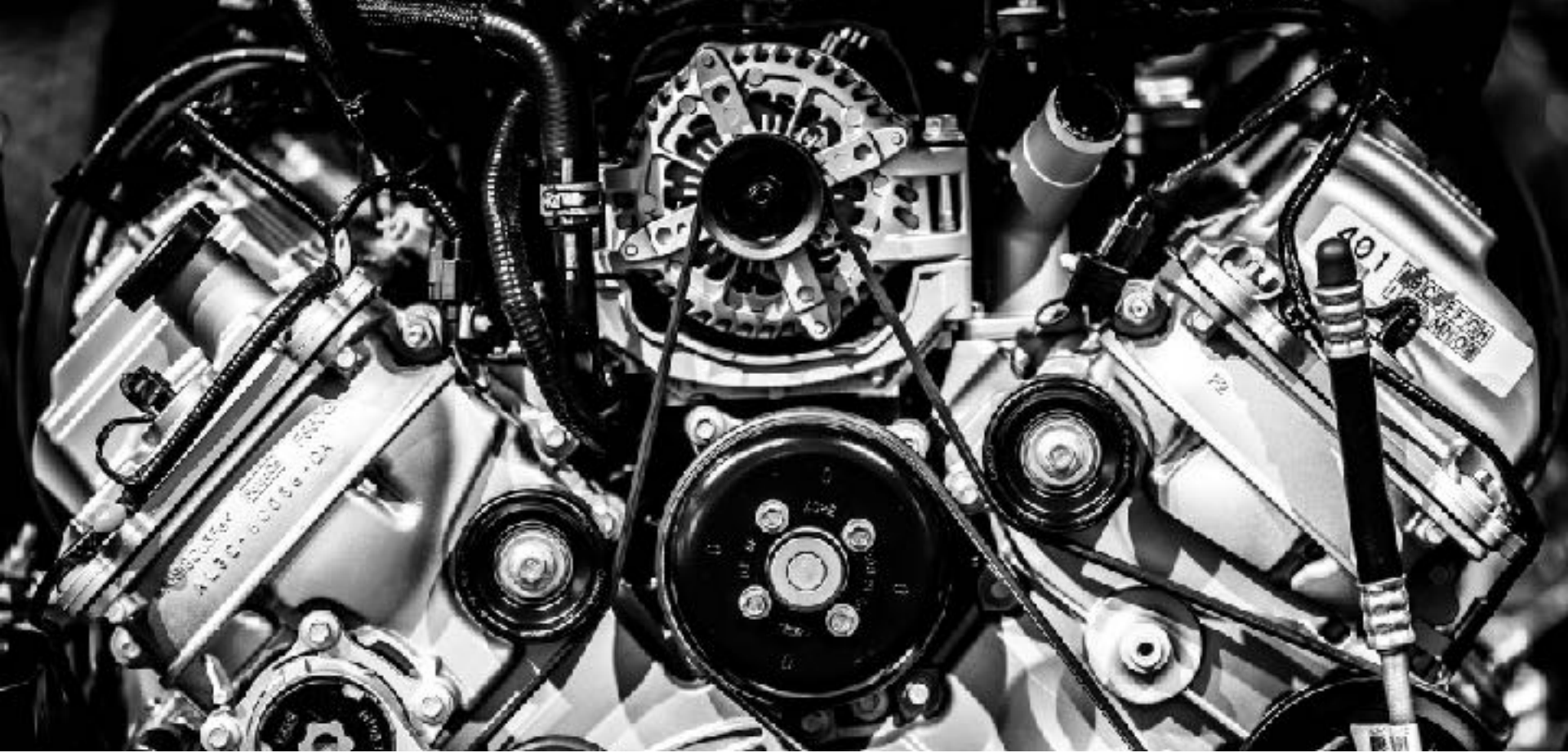
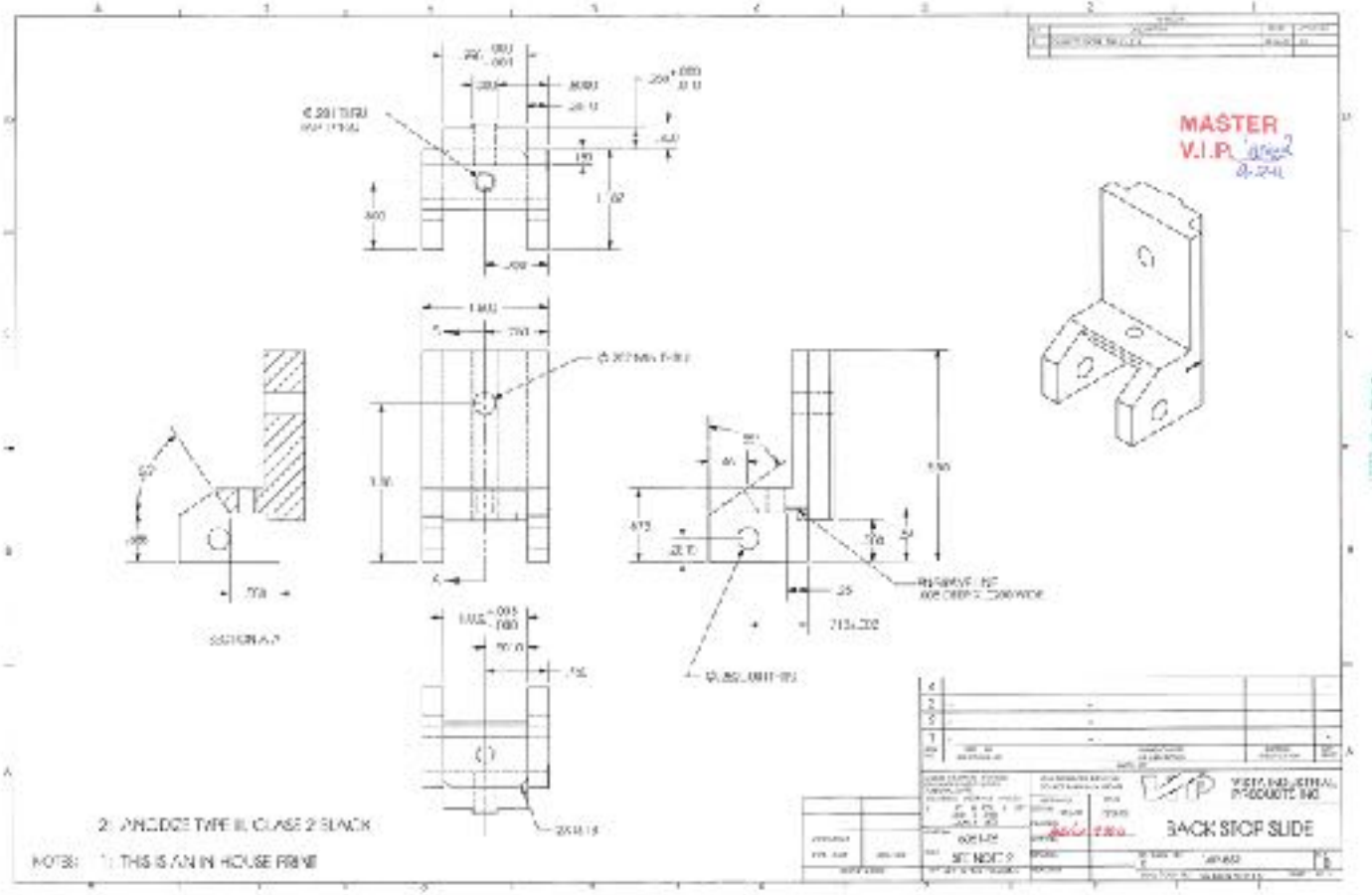
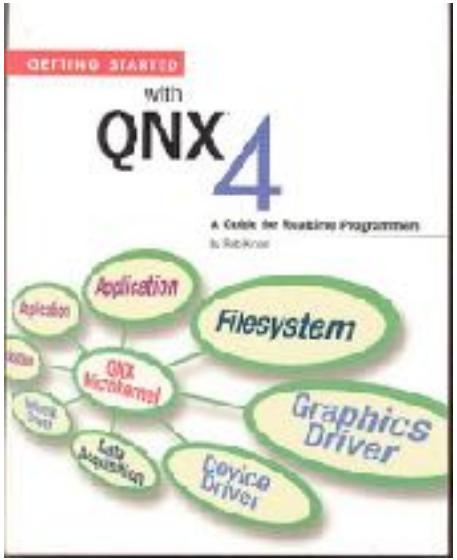
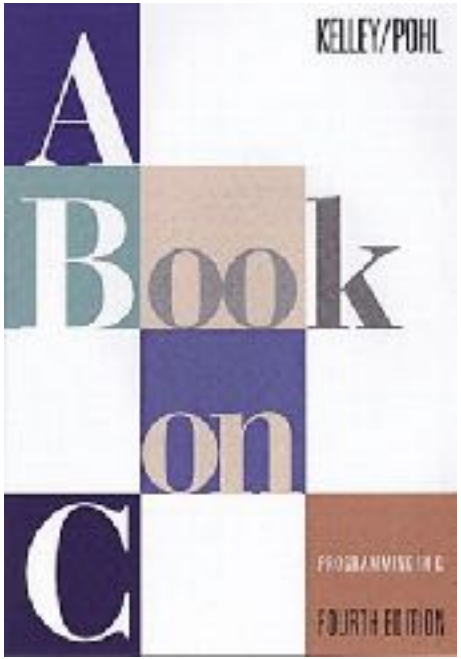
PDI DreamWorks Animation SKG




MASTER
V.I.P.
BACK STOP SLIDE
NOTE: 1. THIS IS AN IN HOUSE PRINT

Software! 😍





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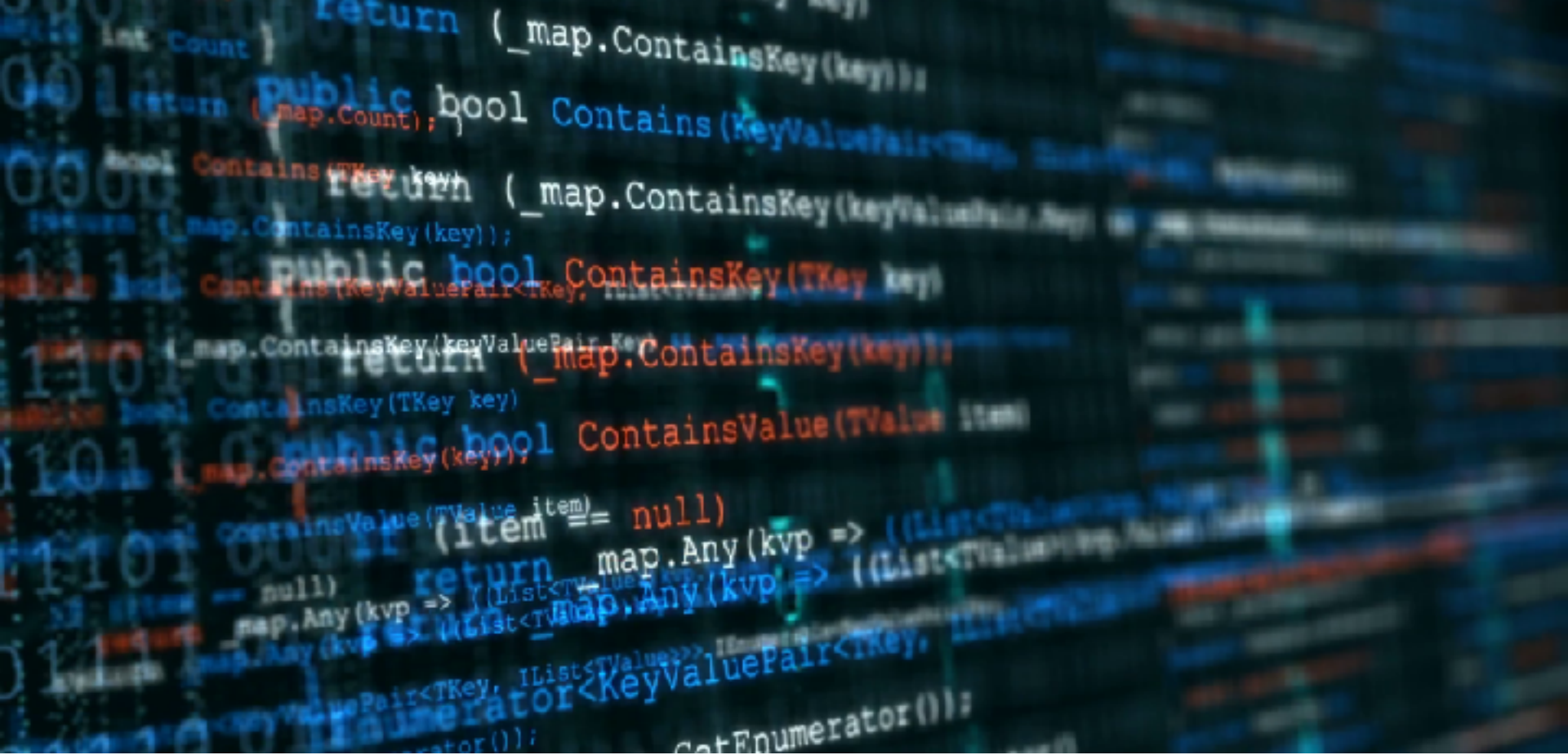
return (_map.ContainsKey(key));
public bool Contains
return (_map.ContainsKey
public bool ContainsKey(TKey
return (_map.ContainsKey(key));
public bool ContainsValue(TValue
(item == null)
map.Any(kvp =>

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S L O W 😩

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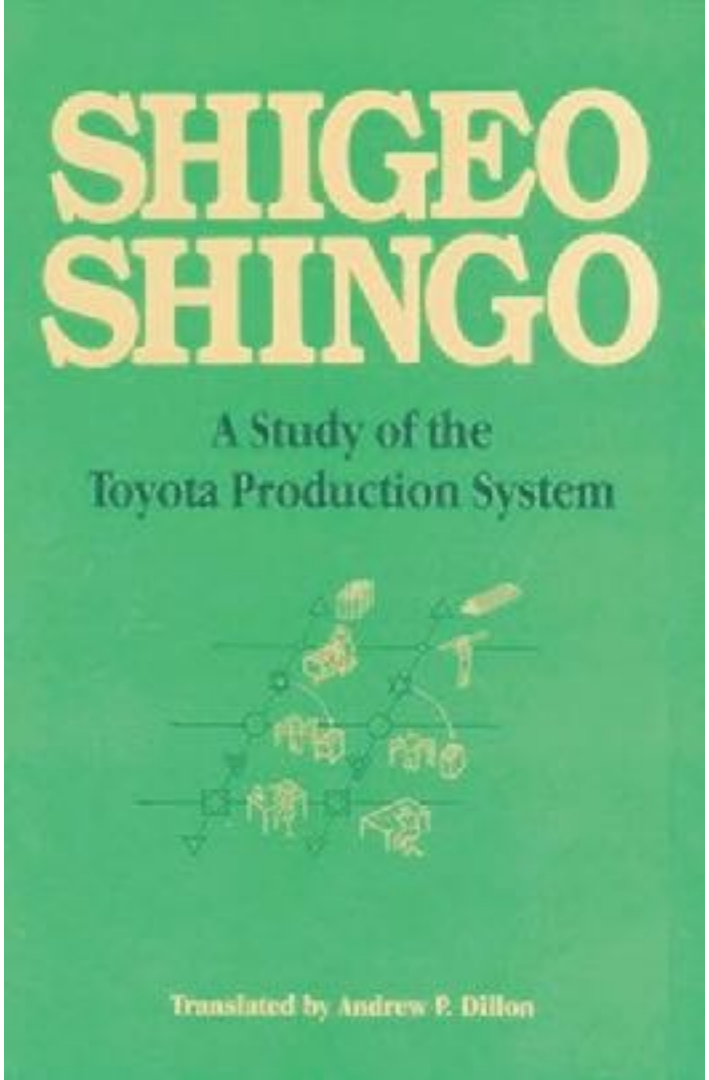
Design

Measure

Learn

Toyota Production System



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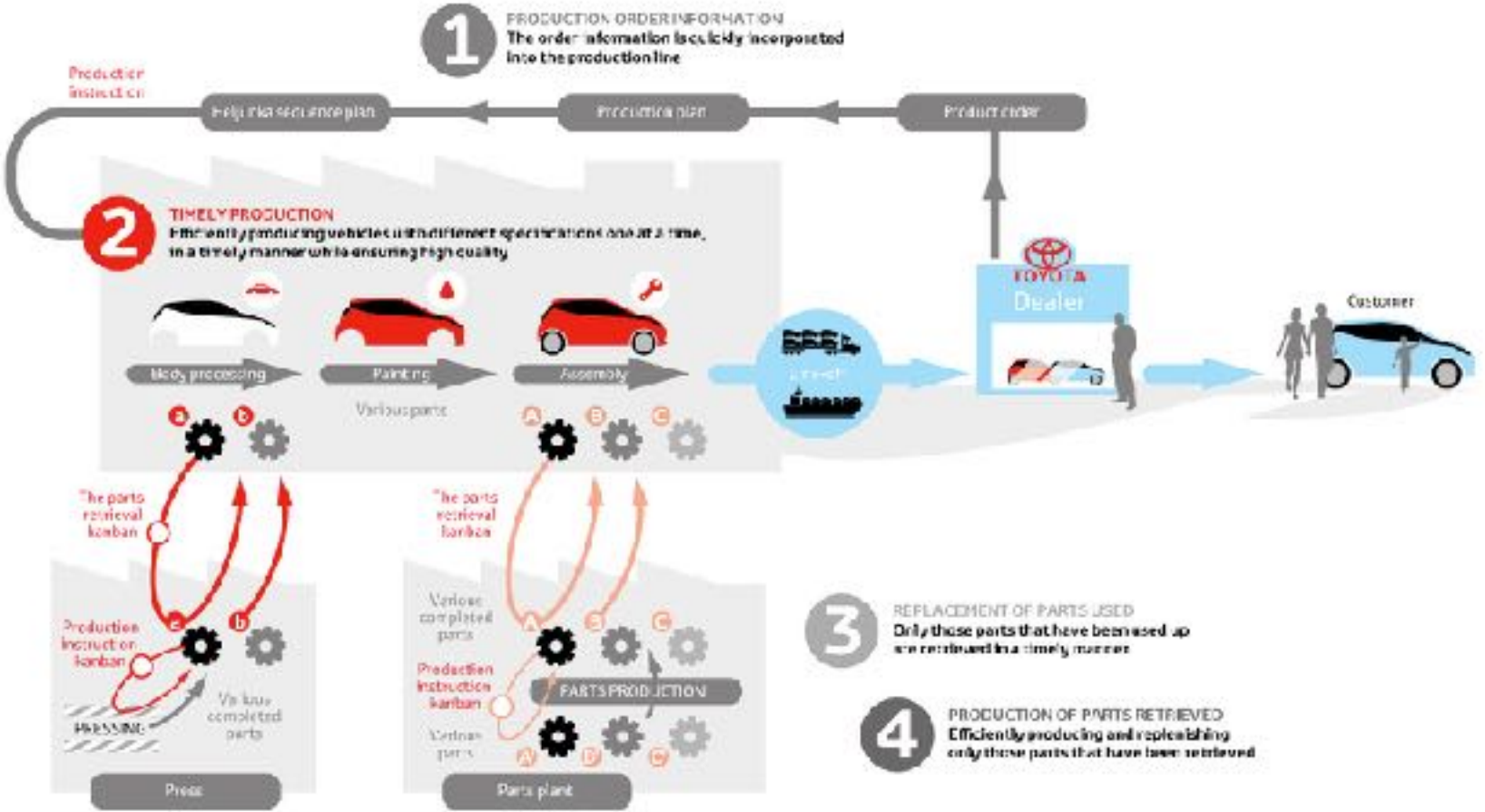

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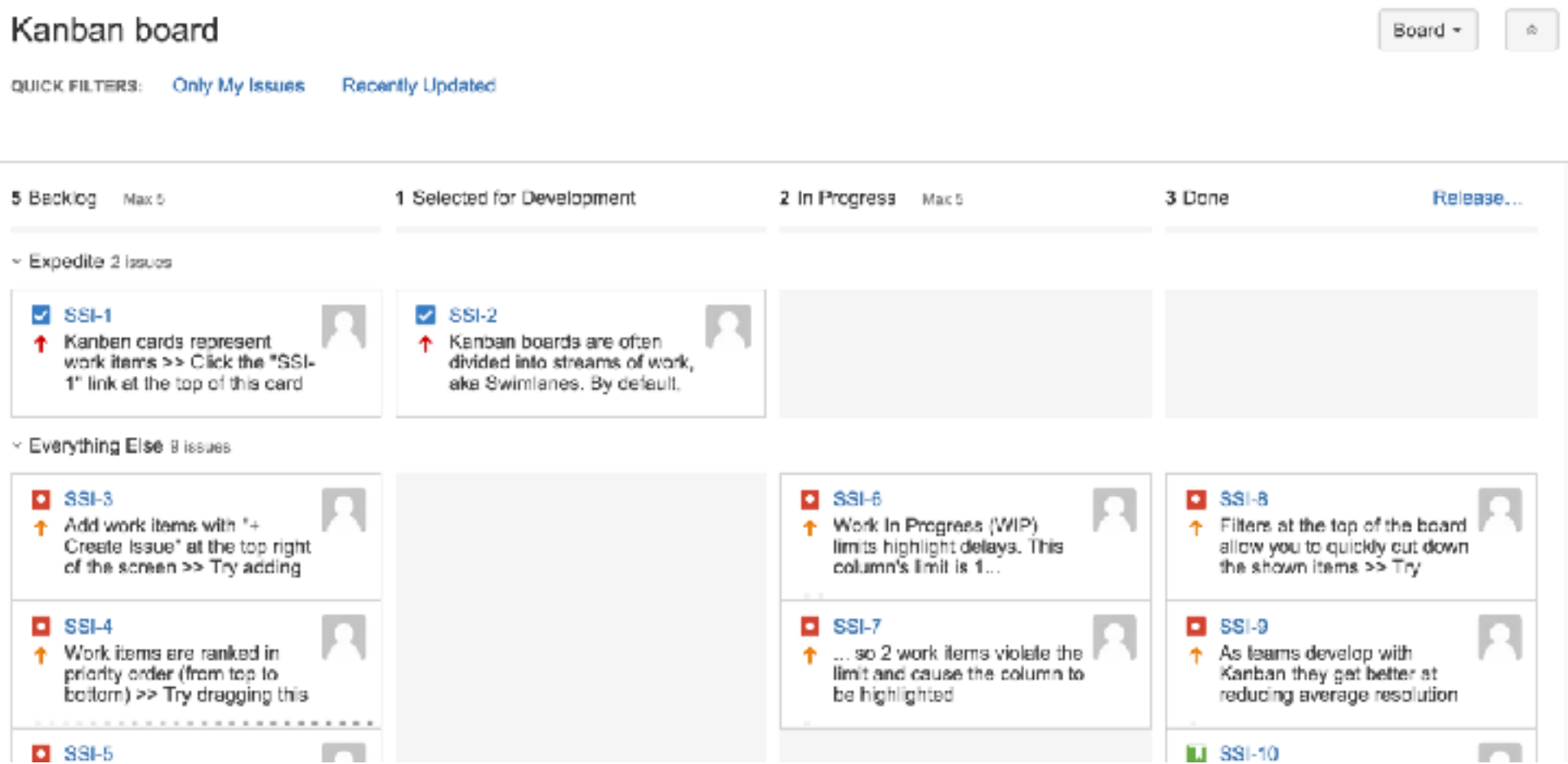
@hollyjallen #DevOpsDaysChi Aug 2019

TOYOTA

PARTS RUNNING
MONTHLY SHIPMENTS
AAO-5143
AAO-5172
AAO-5338
AAO-5348
KANBAN
CA 2


Kanban board
Board
QUICK FILTERS: Only My Issues Recently Updated
5 Backlog Max 5
1 Selected for Development
2 In Progress Max 5
3 Done
Release...
Expedite 2 issues
SSI-1
Kanban cards represent work items >> Click the "SSI-1" link at the top of this card
SSI-2
Kanban boards are often divided into streams of work, aka Swimlanes. By default,
Everything Else 8 issues
SSI-3
Add work items with "+ Create Issue" at the top right of the screen >> Try adding
SSI-6
Work In Progress (WIP) limits highlight delays. This column's limit is 1...
SSI-8
Filters at the top of the board allow you to quickly cut down the shown items >> Try
SSI-4
Work items are ranked in priority order (from top to bottom) >> Try dragging this
SSI-7
... so 2 work items violate the limit and cause the column to be highlighted
SSI-9
As teams develop with Kanban they get better at reducing average resolution
SSI-5
SSI-10

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To Do
Doing
Done
USE KANBAN
TRY KANBAN TOOL
LEARN ABOUT KANBAN
GET SOME STICKY NOTES!
GET A WHITE-BOARD

Kaizen
Continuous Improvement

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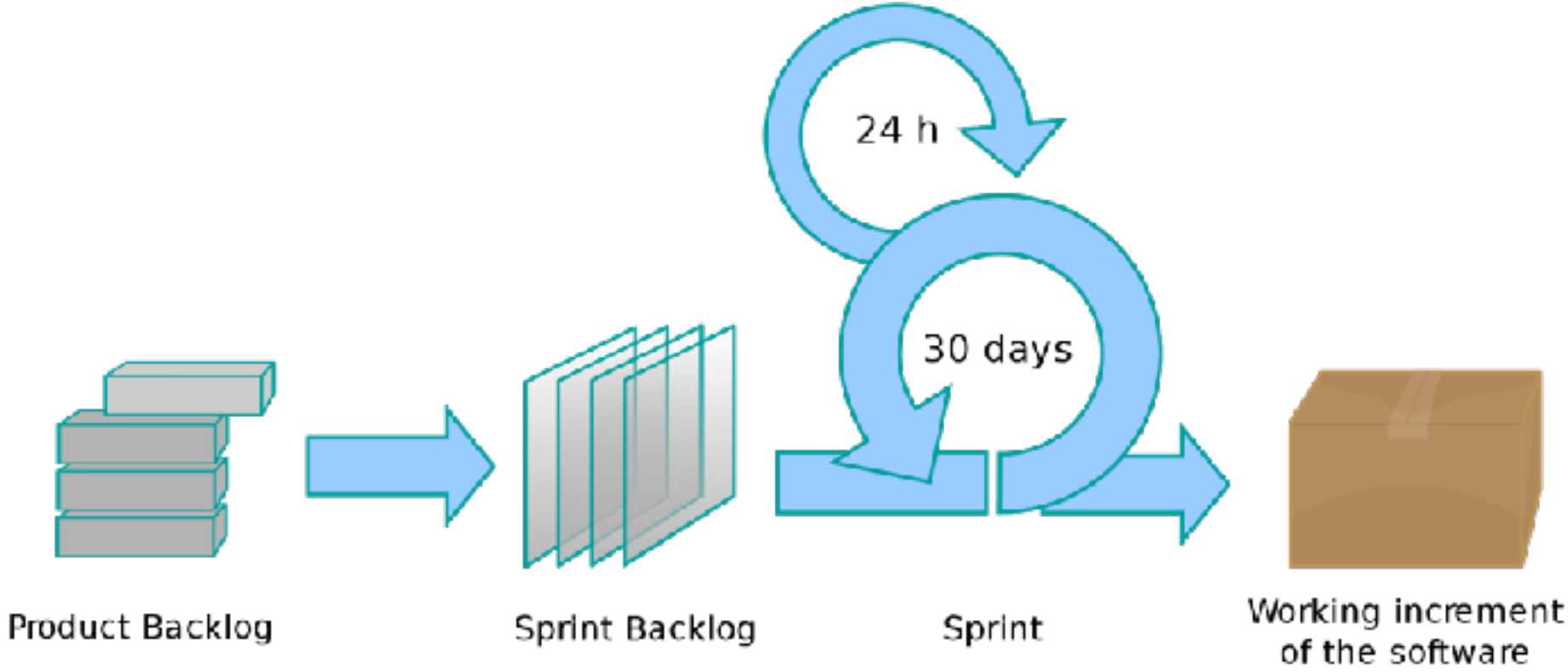
Design

Measure

Learn


24 h
30 days
Product Backlog
Sprint Backlog
Sprint
Working increment
of the software

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Why do some teams deliver the right things fast?

Executive dedication to learning

High Trust Teams

Design

Measure

Learn

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Slack launched
February 2014

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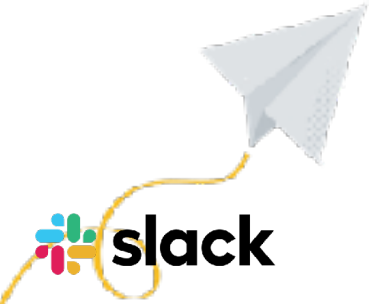
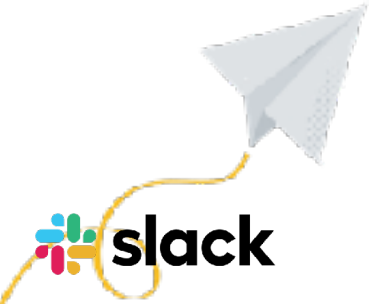
5 Years

Grew to 10+ million daily active users in more than 150 countries



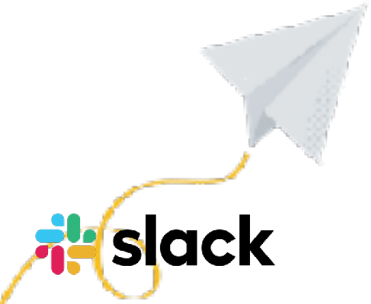
5 Years

From 100 to 15,000 servers
In 25 cloud data centers
world-wide



5 Years

From 8 to 1,600 people
In 10 offices world-wide



Design

Measure

Learn

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✅ Continuous Deployment

✅ Experiment Frameworks

✅ User Research

Something didn't scale...

Centralized Operations

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Who should be responsible for the management, monitoring and operation of a production application?

Centralized Operations

Devs

Features

Scale

Architecture

Ops

Cloud Infra

Deployment

Monitoring

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Ops is getting the pages

Product Development grew faster
than Operations,
A lot faster

20 Product Developers

1 Ops Engineer

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How can operations reliably reach the developers when there's a problem?

Devs

I've never been on-call before, this is scary!

Ops

Now I know I can find a developer when I need to.

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Ops is getting the ~~pages~~ first pages
Ultra-senior devs on-call

"Call Maude, she knows how this works"

Design

Measure

Learn

How can operations reliably reach the developers when there's a problem?

Most devs
go on-call
Fall 2017

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"Wait, I'm on-call now?"

Devs

I'm glad I'm only on call a few times a year

Ops

I'll be able to reach a frontend engineer if I need to.

Learn by Doing

On-call 3 times a year 🤔

Ops is getting the ~~pages~~ first pages

~~Ultra~~-senior devs on-call

Seven ~~One~~ dev rotations

Continuous Deployment
Dozens of prod deploys a day

Human Routers

Devs

I don't understand this part of the code

Ops

These are the machine alerts I'm seeing

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"Call Andy, he knows how this works"

Postmortems weren't a great place for learning

Reorg!

Fall 2017

Operations is out

Service Engineering is in

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How can we ensure that developers know when there's a problem?

~~Centralized Operations~~

Service Ownership

High Trust
Learning Organization

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Devs

Features

Reliability

Performance

Service Eng

Cloud Platform

Observability tools

Service Discovery

Define best practice

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Site Reliability Engineers

- Devops generalists
- Emotional intelligence
- Mentoring
- Ambassadors
- Operational maturity

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SRE embedded in dev teams

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Devs

Um, where are the SREs?

SREs

I'm over here doing operational tasks

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SRE ~~Ops~~ is still getting the first pages

How do we lower operational burden on the SREs?

Plan: Send these paging alerts to the development teams

Define service health and operational maturity

- The teams have to know what they own
- We had a lot of features and services without formal ownership

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Define service health and operational maturity

- At least one alerting health metric, like latency or throughput

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Define service health and operational maturity

- Teams needed to get on-call ready
- At least 4, preferably 6+ engineers participating to make it sustainable

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Devs

We need training

SREs

We're going to plan this out perfectly

Host level alerts
Hundreds of them

Test with the users

Everything was fine!

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Empowered
Continuous Improvement

Devs ~~Ops~~ are getting the first pages

~~Ultra-senior~~ devs on-call

Dozens ~~Seven~~ ~~One~~ of dev rotations

~~Centralized Operations~~

Service Ownership

How do we make postmortems
a source of learning?

How do we make sure that incident command is a skillset throughout Slack?

How do we make it even easier to operate a service?

Design

Measure

Learn

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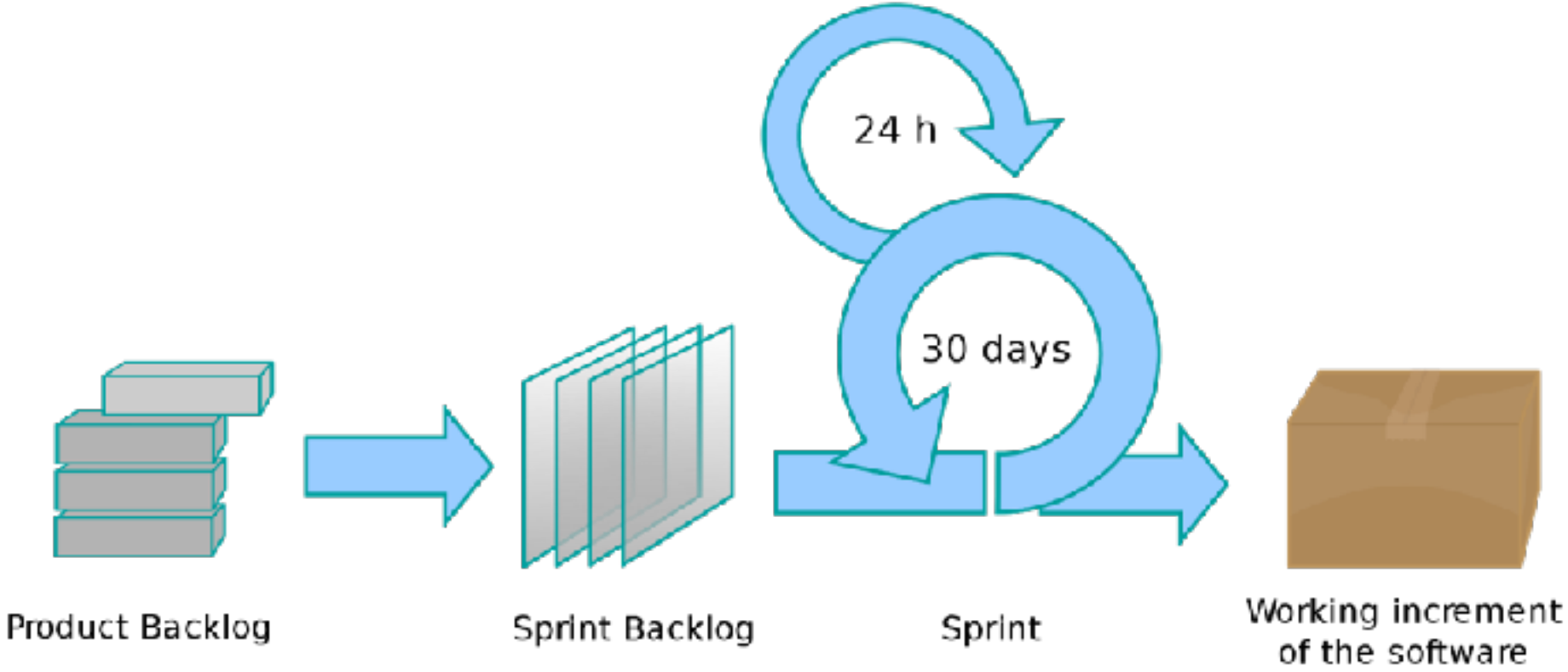
24 h
30 days
Product Backlog
Sprint Backlog
Sprint
Working increment
of the software

Copy the questions
Not the answers

Change is possible
You don't have to be ready

Empowered
High Trust
Continuous Improvement

Design

Measure

Learn

Design Thoughtfully
Measure Ruthlessly
Learn Faster

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Thank You!

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