

BUSINESS AGILITY BLOCKERS

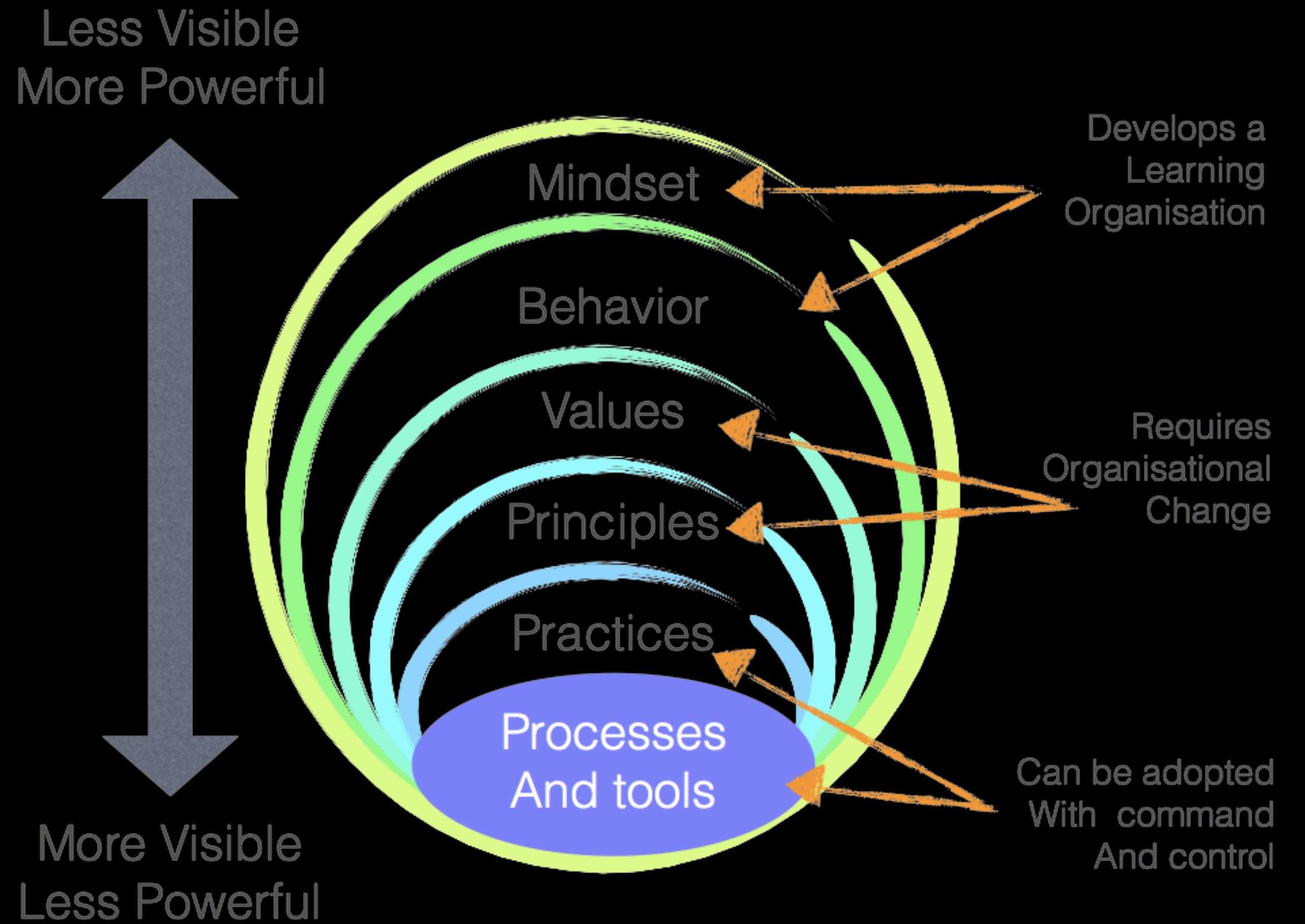
HOW TO UNDERSTAND AND DEAL WITH THEM

SAMUEL CRESCÊNCIO

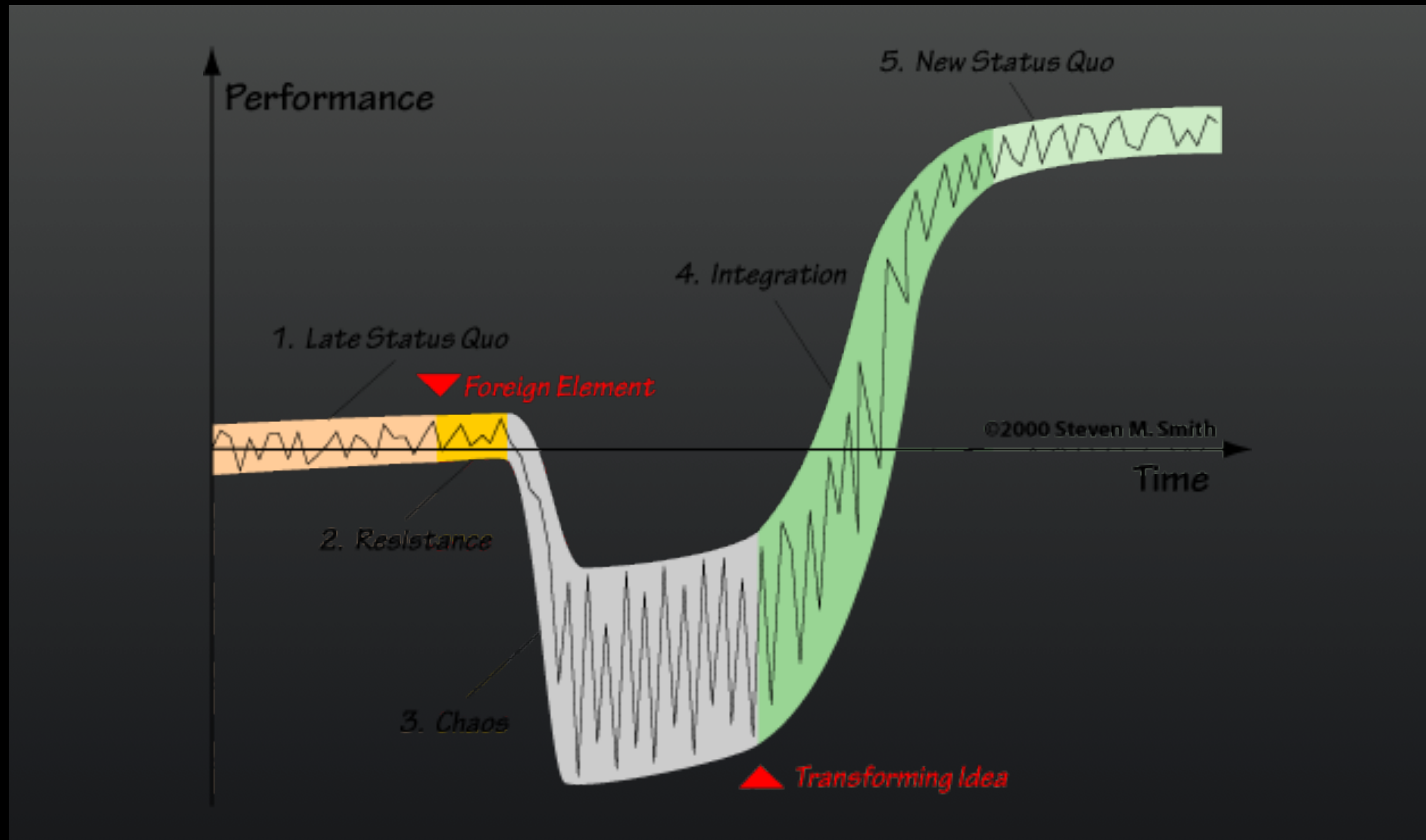
@SCRESCENCIO

Lean it 
HIGHWAY TO BUSINESS AGILITY

THE POWER OF MINDSET CHANGE



J CURVE OF CHANGE



HYPE CYCLE

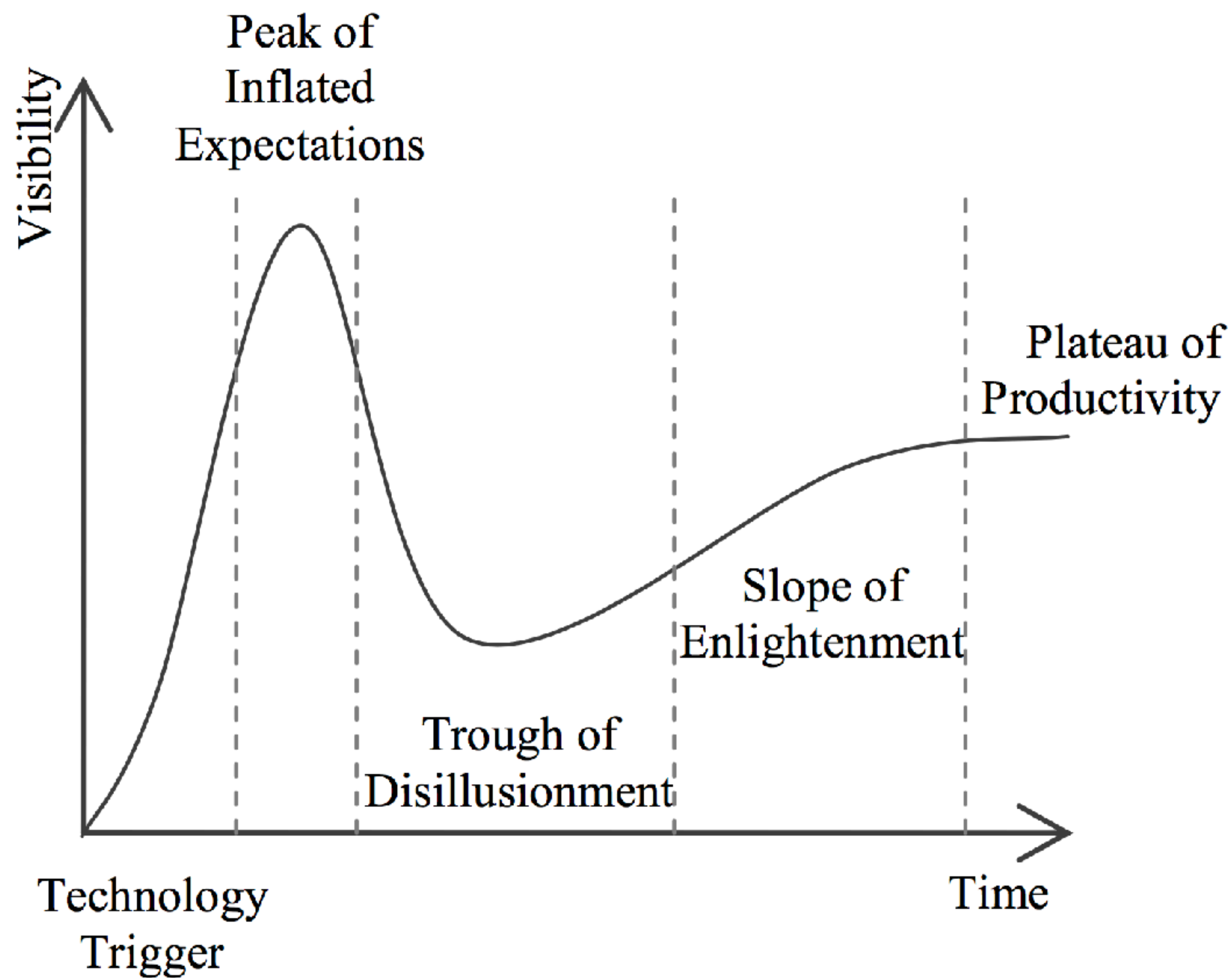


Figure 1. Gartner's Hype Cycle

BUSINESS AGILITY

MATURITY ASSESSMENT

Legend

- Business Agility Maturity Enterprise A
- Business Agility Maturity Enterprise B



BUSINESS AGILITY BLOCKERS

UNDERSTANDING WHY

STRATEGY

VALUE STREAM FOCUS

STRATEGY

Without value stream focus, people tend to focus on activities of the current department, not on the value for the real customer.

Value stream focus connects the entire value chain, improves communication and foster unrestricted and unconditional collaboration.

SHARED VISION AND PURPOSE

STRATEGY

Purpose is what really bonds people together towards a common goal: achieve the vision. Without a clear definition of what the purpose really is, team might not reach cohesion and vision may never be fulfilled.

SHARED PRINCIPLES AND VALUES

STRATEGY

When people agree on what are the principles and values that guide their behaviour, they don't need a lot of rules for controlling them. They will be able to develop an inner pressure where everybody understands what is acceptable and what is not.

EMPOWERED CROSS-FUNCTIONAL TEAMS

STRATEGY

Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.

ECO-SYSTEM AGILITY

STRATEGY

Real business agility requires going beyond organisational frontiers. When people all over the value stream, including not only internal departments but mainly, partners, customers, users and providers do collaborate to constantly improve the system, then real business agility happens.

CLARITY OF BUSINESS OBJECTIVES

STRATEGY

In an agile environment, responsibility for delivering results is shared by all community members. They know exactly what success looks like and how they will measure it.

MANAGEMENT

VISUAL MANAGEMENT

MANAGEMENT

Visual management lets you know exactly what is going on and where the bottlenecks of the system are. It allows you to visualize the flow, understand its throughput, and make better delivery predictions. It also boosts collaboration, improves communication, replaces fake status reports, engages respect for people, and foments servant leadership.

VALUE DRIVEN BACKLOGS

MANAGEMENT

When teams have a clear understanding of value and how it's measured they can be pragmatic on choosing what's going to be produced and when. Therefore, maximizing the flow of value and reducing waste by eliminating development of non value added features.

PULL SYSTEM

MANAGEMENT

When using pull system, teams don't generate waste by overloading the system and can manage system loading to reduce work in progress and achieve maximum performance.

ECONOMIC FLOW MANAGEMENT

MANAGEMENT

When properly understanding cost of delay, cost of transaction, holding cost, coordination cost, and cost of production, teams will be able to make better decisions. It will help them to diminish time to market, reduce cycle time, maximize value delivery and improve efficiency in the entire eco-system.

CONTINUOUS DELIVERY

MANAGEMENT

Deliver sooner and improve continuously. That's one of the main principles of agile that helps teams to learn more and faster with shorter feedback loops, and therefore, delight their customers.

CAPACITY MANAGEMENT

MANAGEMENT

Understanding current capacity is a pre-requisite to start delivering on time. Agile teams learn their velocity by analysing the throughput of the flow. Therefore, they can enable pull system and be more accurate about what they are capable of.

ENGINEERING

TEST AUTOMATION

ENGINEERING

Safety is one of the main pre-requisites of modern agile. The only way to achieve quality and correctness of complex engineering systems is through teste automation. Moreover, agile teams start from scratch with a test first approach in mind, helping them to build integrity in as they evolve.

STANDARDIZED CLEAN CODE

ENGINEERING

Complex code is harder and more expansive to maintain. It makes it more difficult to read, to test, and to adapt. Agile teams will have clean and simple code as a standard and will guarantee that through automated build processes.

FAULT TOLERANCE AND SELF-HEALING

ENGINEERING

Modern agile architectures will be able to automatically deal with problems. It means that they may have a failure but don't crash. Instead, they are capable of healing themselves by instantiating new resources, upgrading and downgrading computational capacity automatically.

EMERGING MICROSERVICES ARCHITECTURE

ENGINEERING

Agile systems must have flexibility to deploy only parts that were changed. Breaking down big monolithic applications into smaller pieces with single responsibility enhances business agility, improves communication and facilitate learning.

DEVSECOPS

ENGINEERING

Agile teams are responsible to use DEVSECOPS practices to design, develop and maintain infra-structure for development, staging and production environments. All fully automated to help the team to gain agility while also taking care of security.

AUTOMATED DEPLOYMENT

ENGINEERING

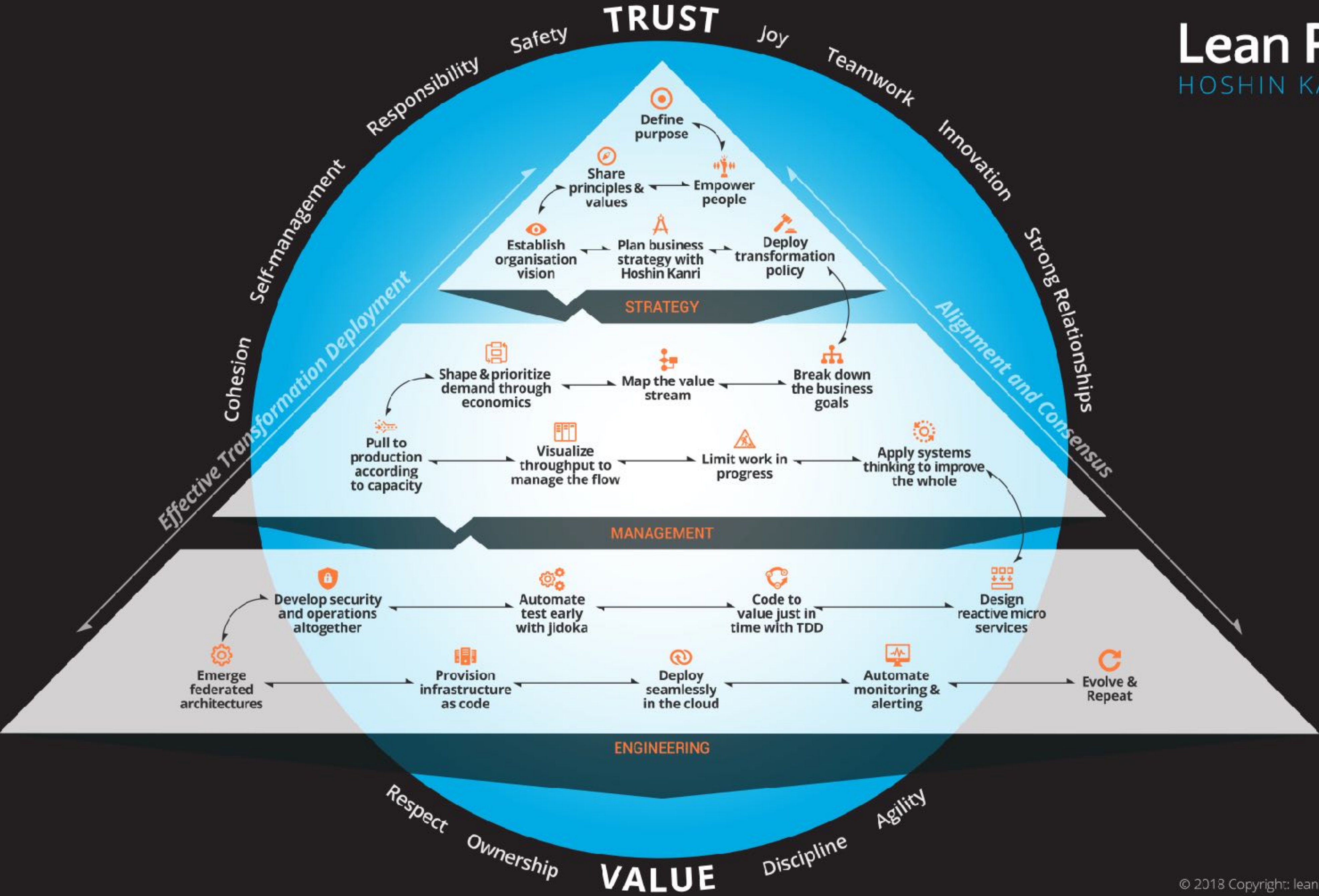
Manual processes are error prone, time consuming and inefficient. Agile teams will use automate scripts that can automatically trigger deployment upon a successful build. Alongside with teste automation and devsecops, it allows them to have always shippable code and achieve continuous delivery.

BUSINESS AGILITY BLOCKERS

HOW TO DEAL WITH THEM

Lean Pyramid

HOSHIN KANRI EDITION





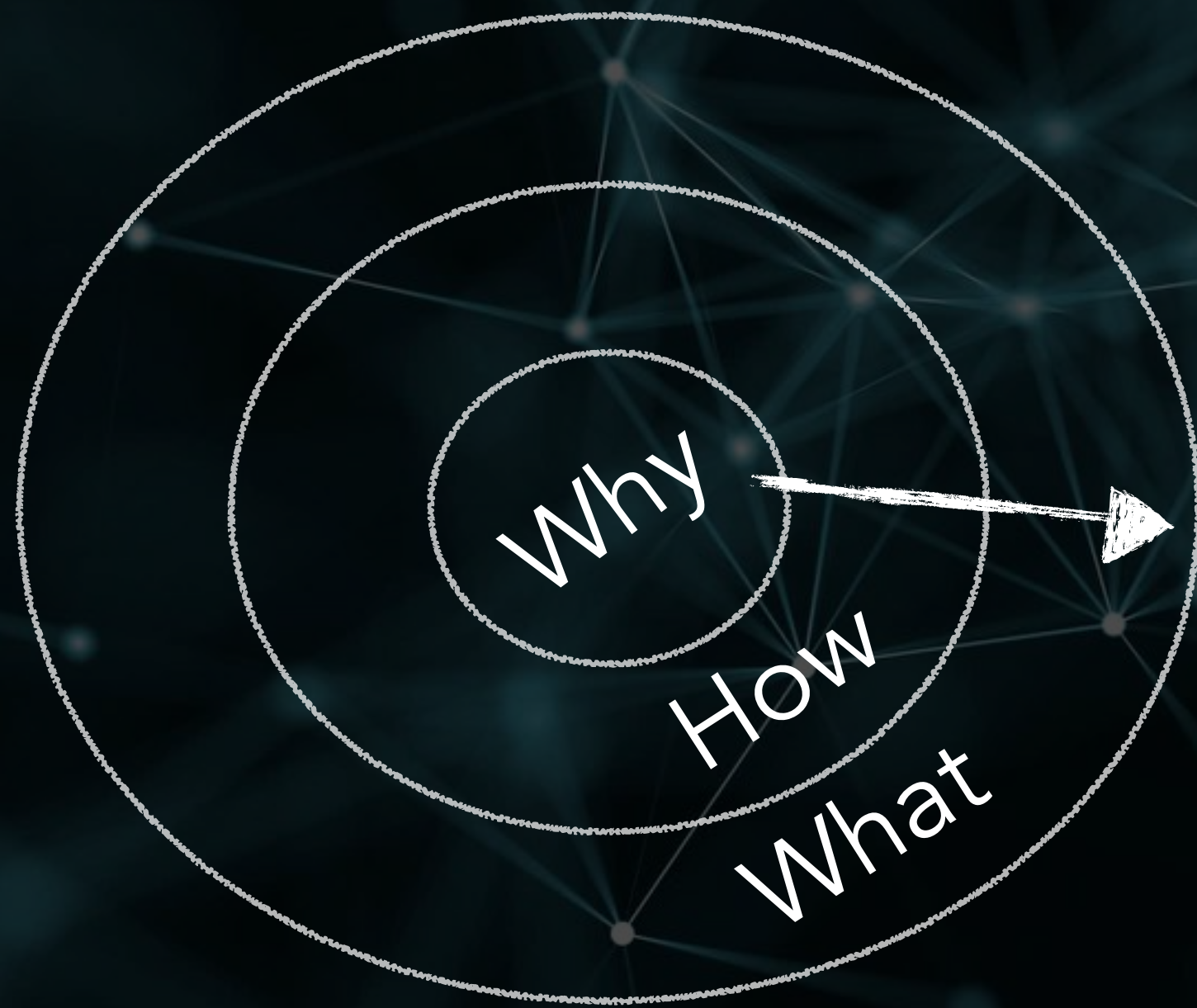
STRATEGY LAYER



Define **PURPOSE!**

Why purpose drives change?

Start with why!



Simon Sinek

Purpose
Values and Beliefs
Skills and abilities
Behavior and Attitude
Environment

5 Steps of driving CHANGE!

Define Purpose



Empower **PEOPLE**

COACHING

KEN

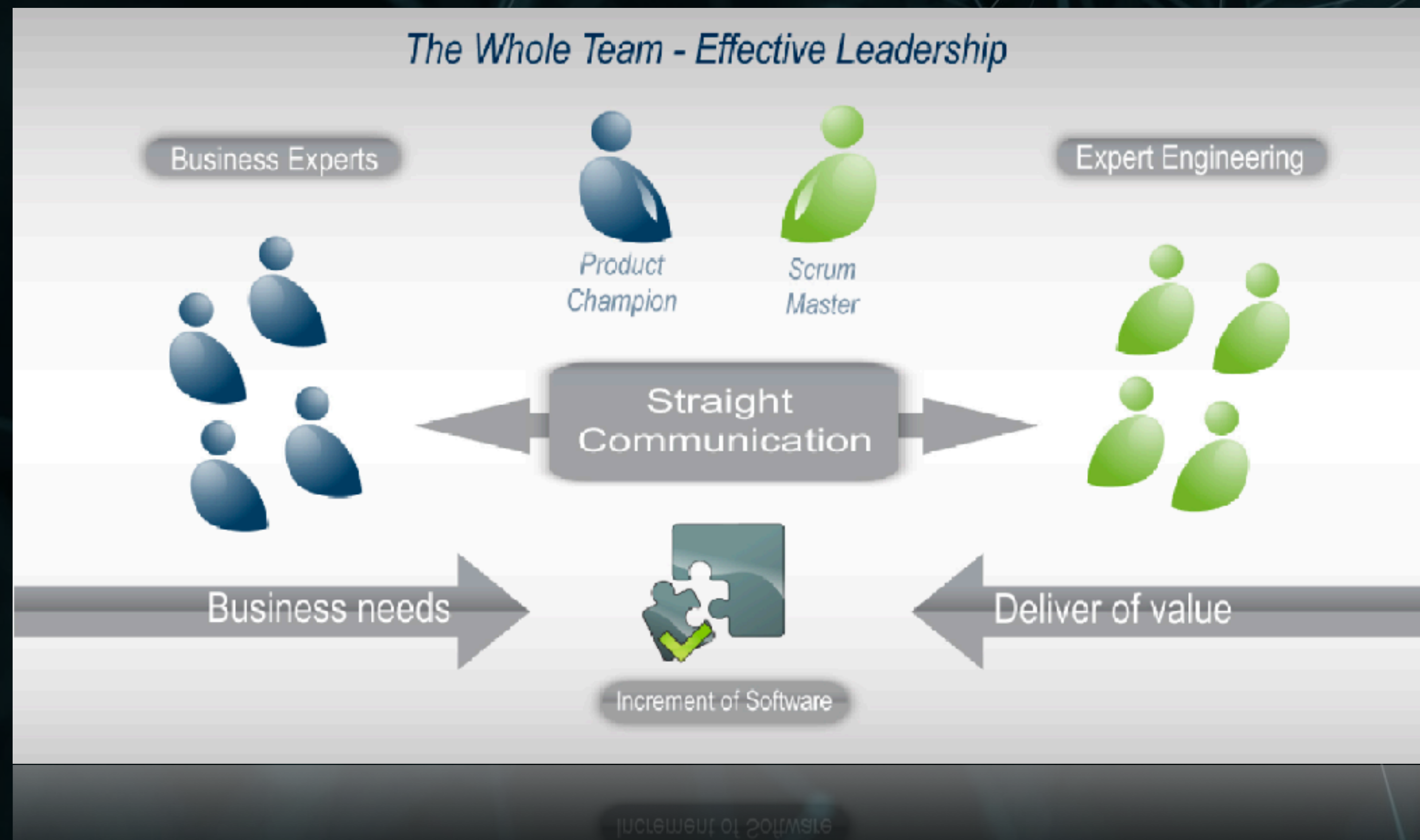
BLANCHARD

SITUATIONAL LEADERSHIP
MODEL



CHARACTERISTICS OF

EFFECTIVE TEAMS



Characteristics of high performance teams

- inspiring leadership
- cross-functional
- self-organized
- small
- complete
- interorganizational
- **colocated** or remote
- *Psychological safety*

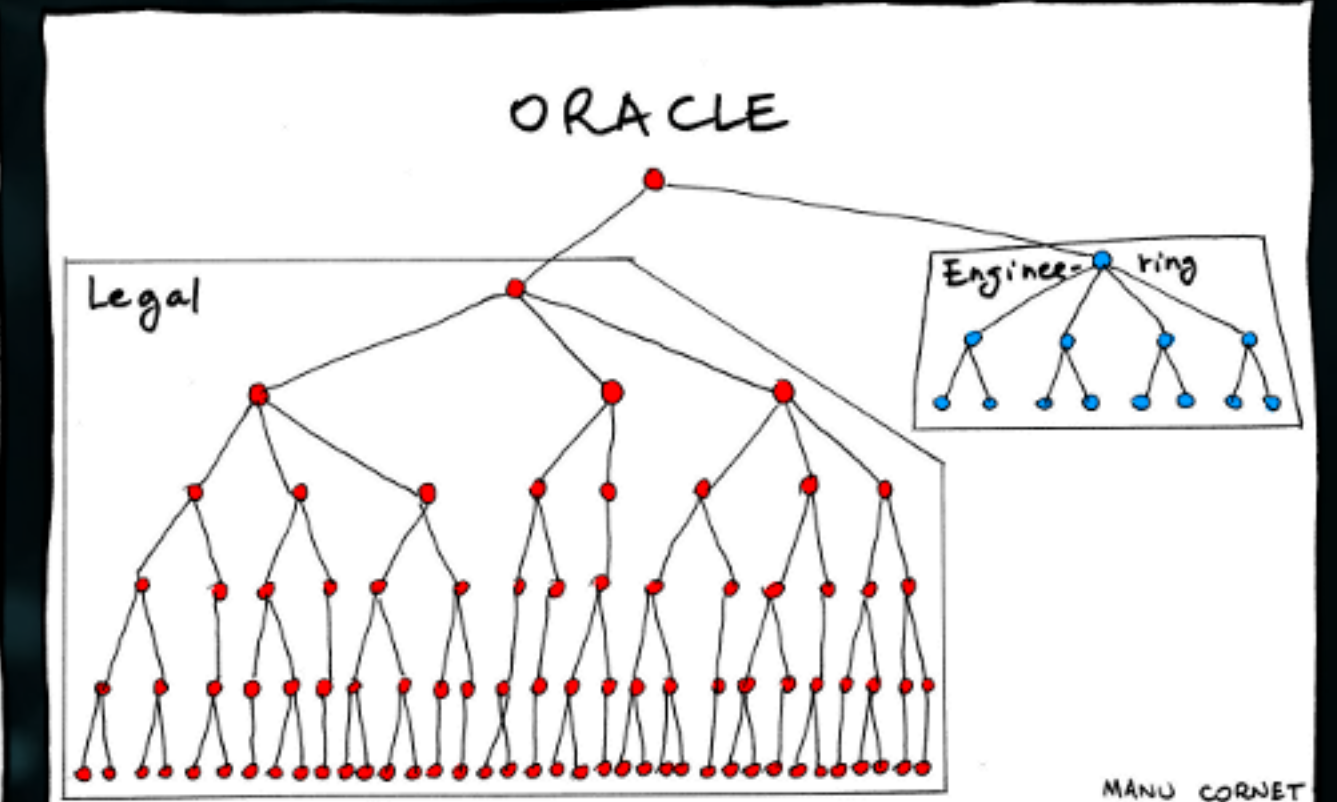
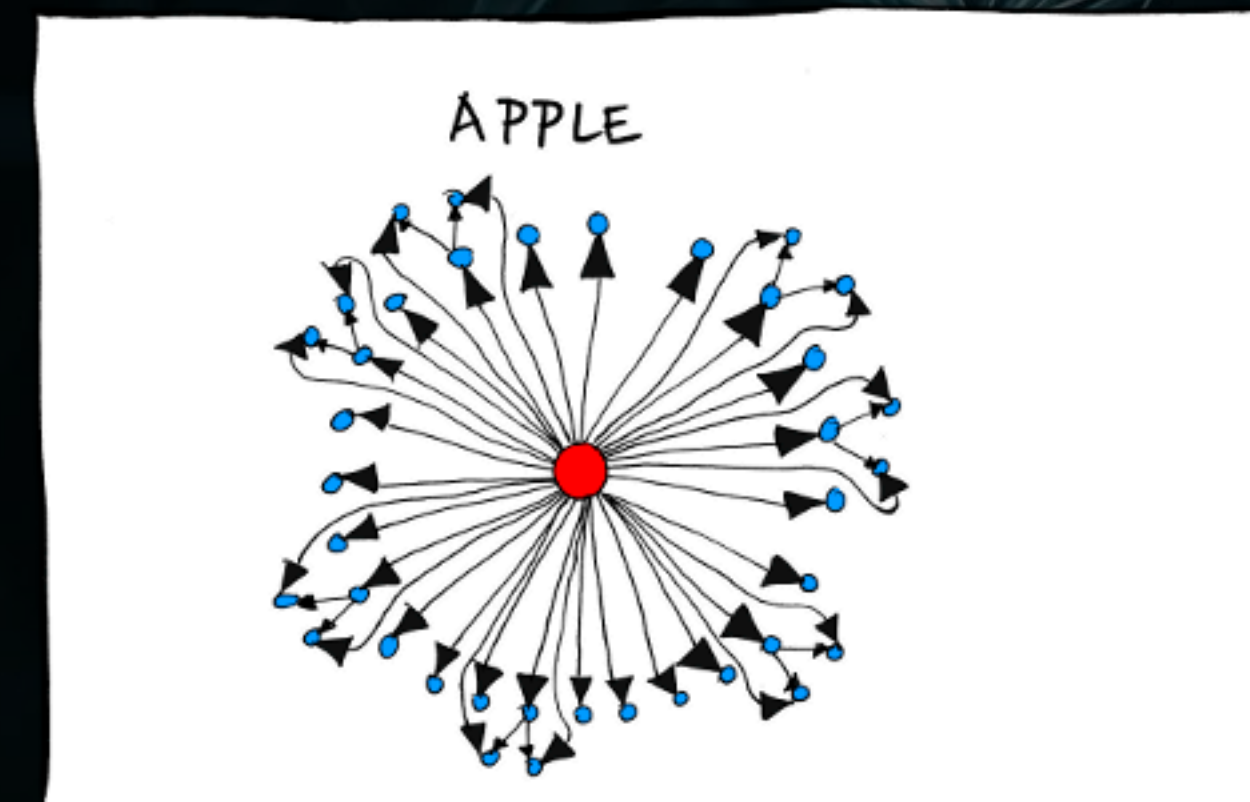
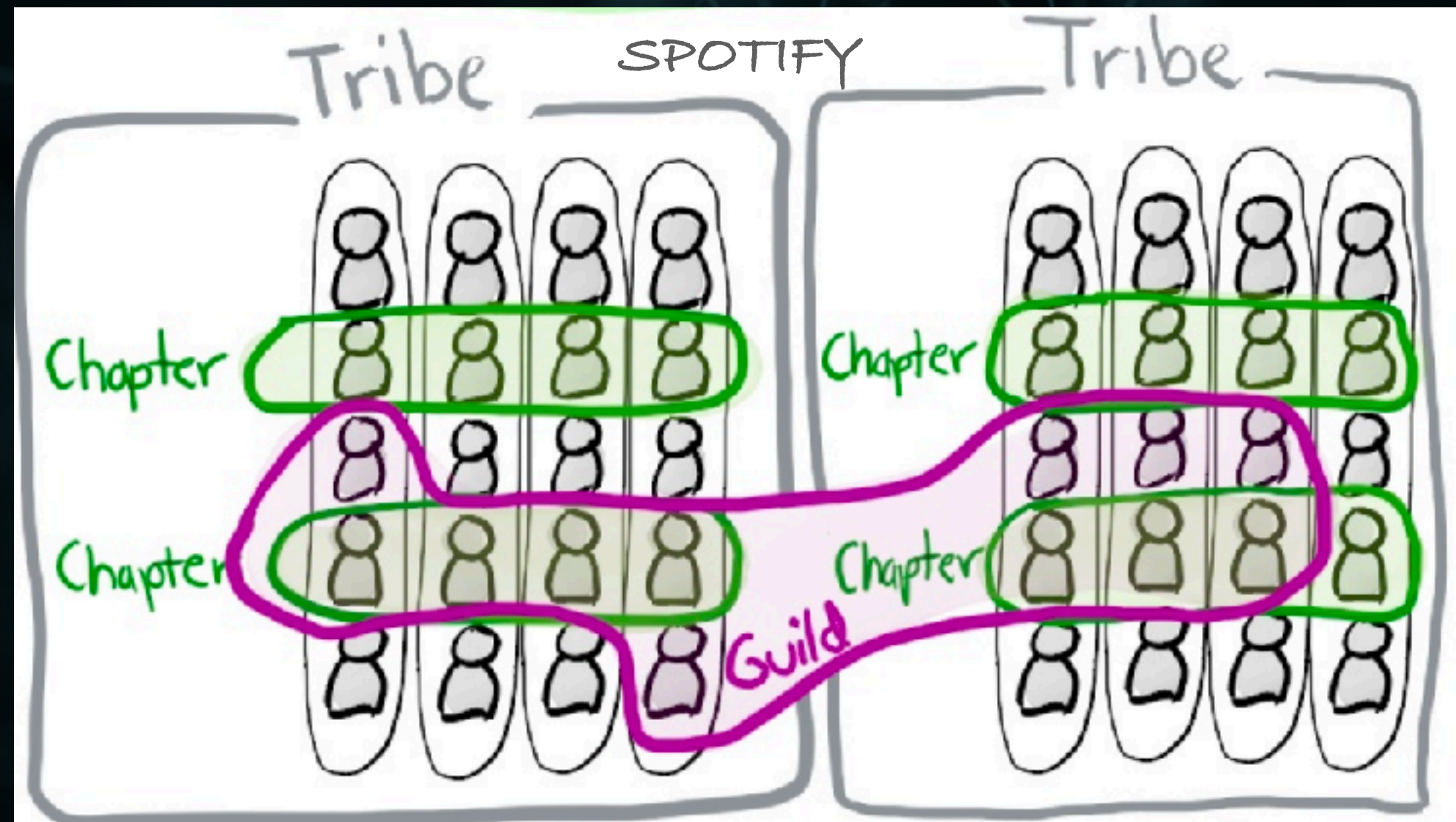
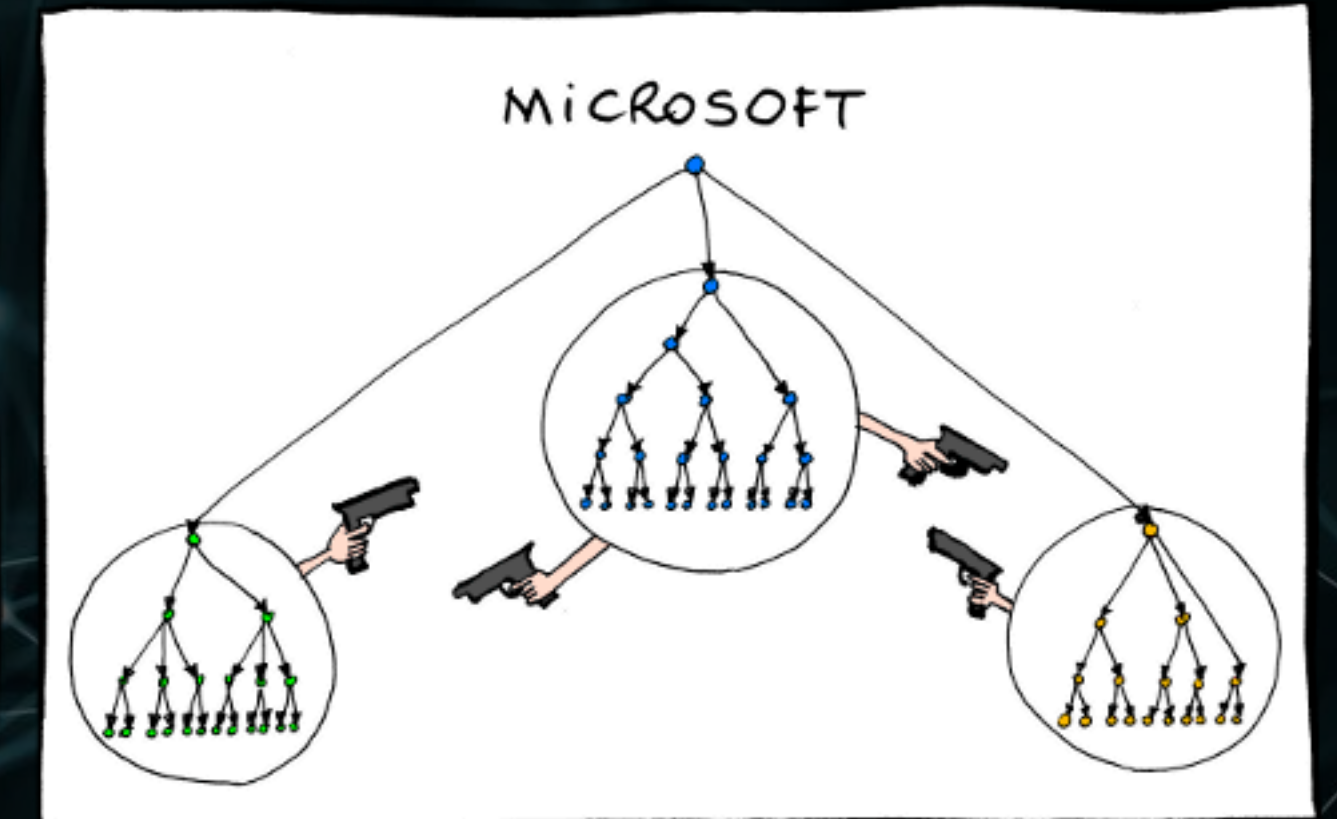
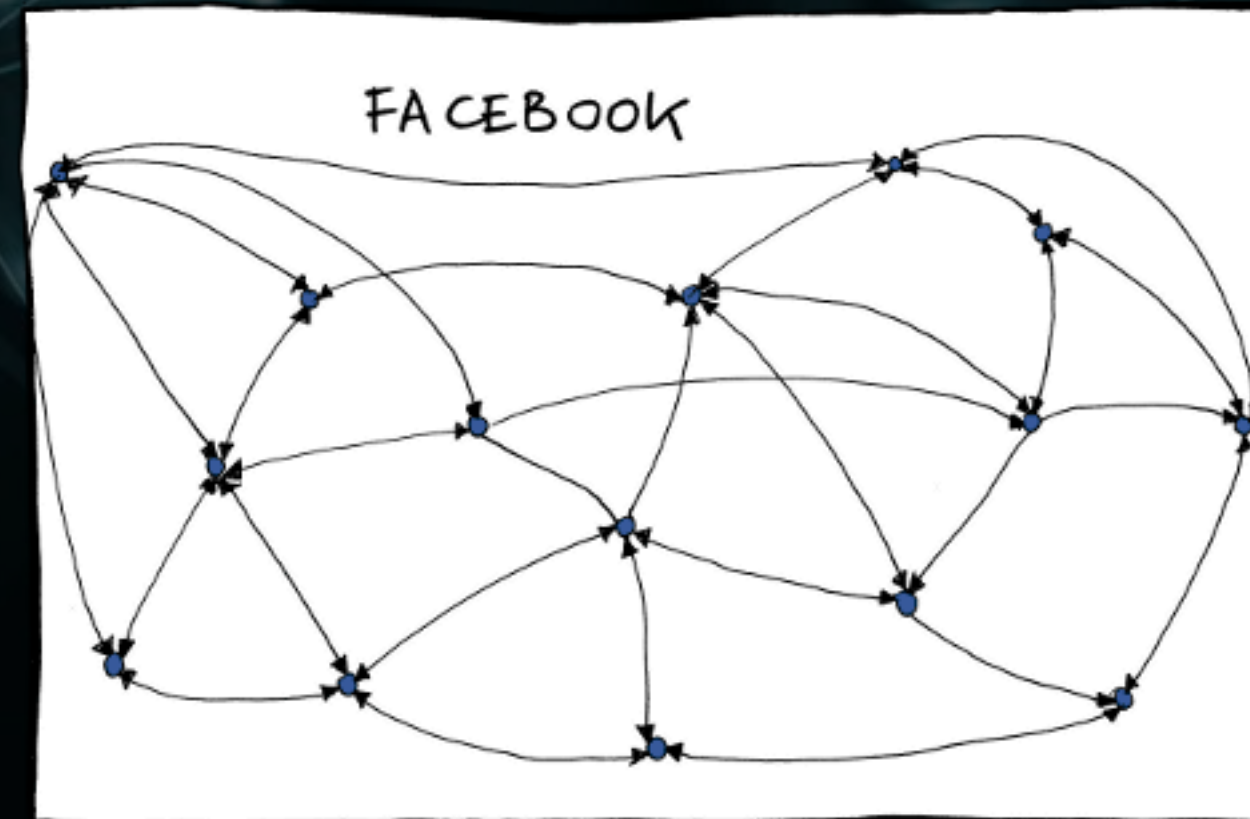
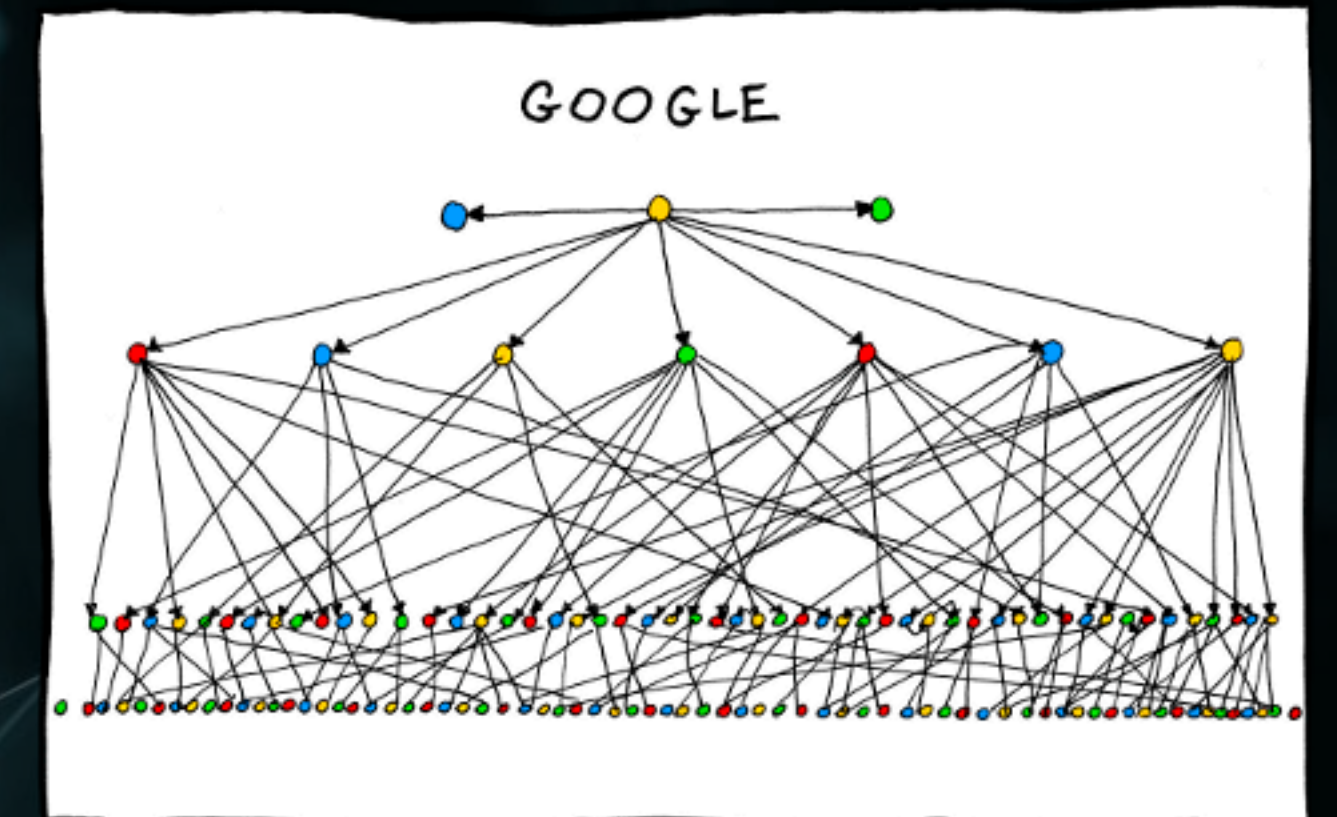
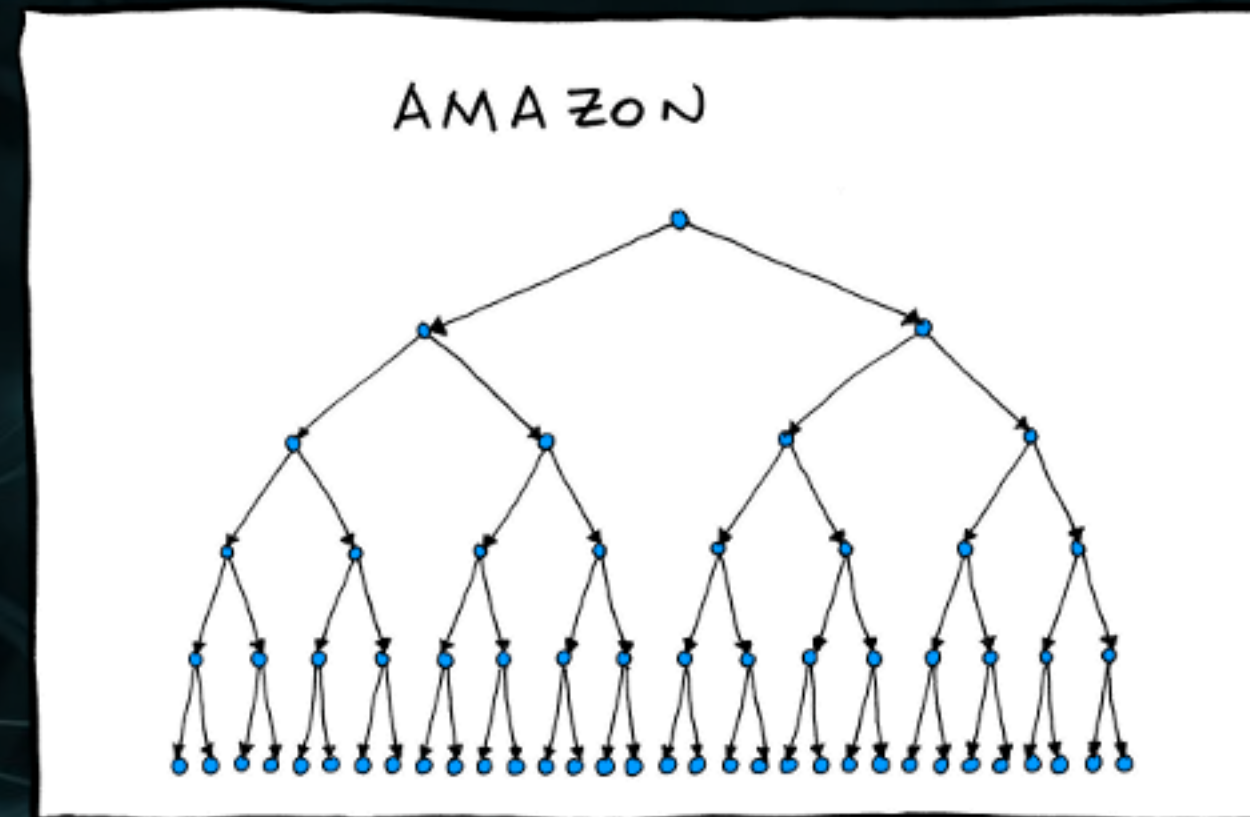
Empower People

FUNCTIONAL

STRUCTURES

"If the parts of an organisation do not closely reflect the essential parts of the product... then the project will be in trouble."

James O. Coplien and Neil B. Harrison



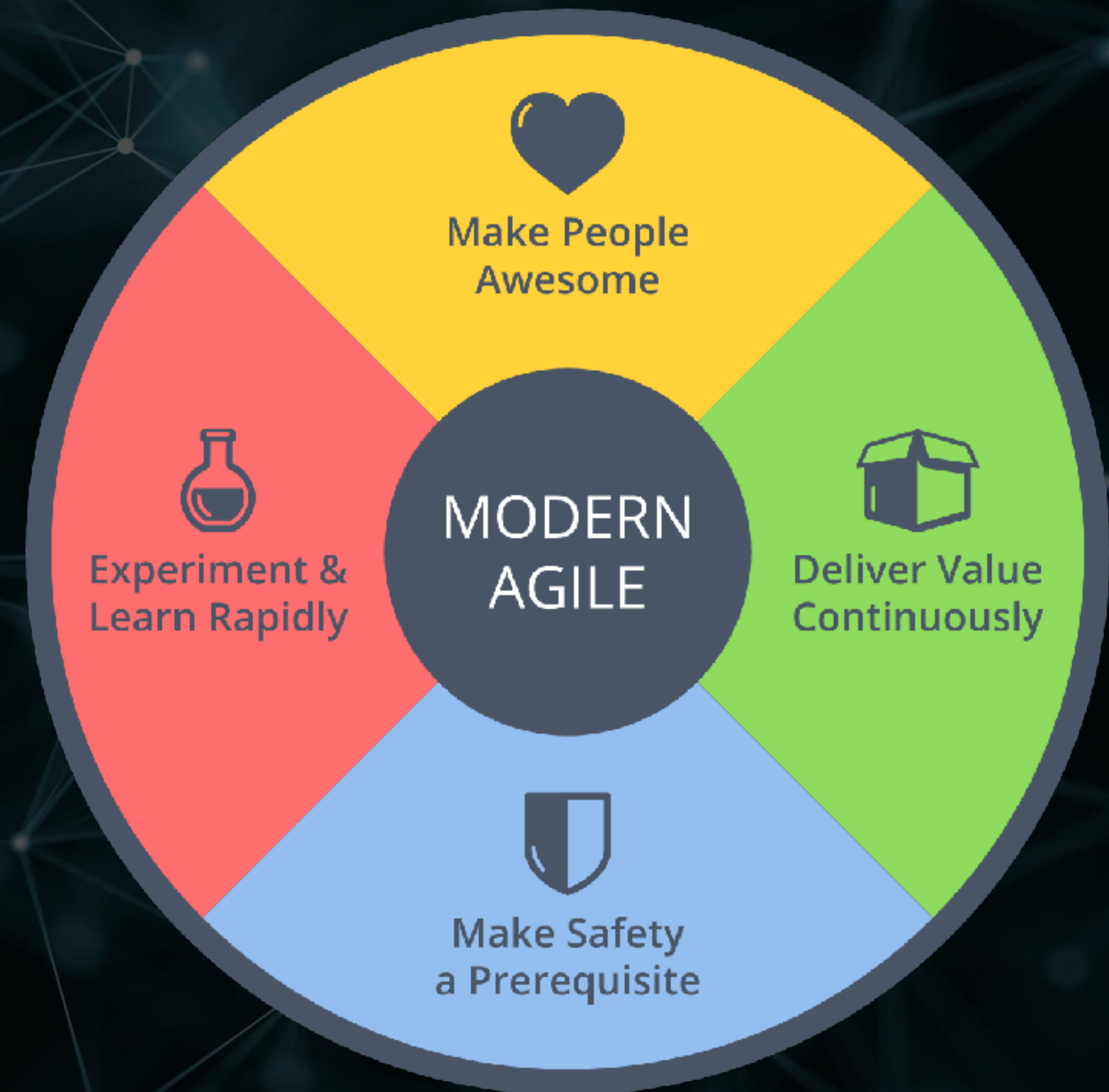


Share **PRINCIPLES** and
VALUES!

SHARE THESE PRINCIPLES

- the root **LEAN PRINCIPLES**
- the Principles and Values of the **Agile Manifesto**
<http://agilemanifesto.org>

- **Modern Agile**
<http://modernagile.org>



Share Principles and Values



ESTABLISH

ORGANISATIONAL VISION!

The **VISION**
defines **WHERE**
you want to be and
WHEN

Example

SpaceX designs, manufactures and launches advanced rockets and spacecraft. The company was founded in 2002 to revolutionize space technology, with the ultimate goal of enabling people to live on other planets.

<http://spacex.com/about>

Establish Organisational Vision

PLAN BUSINESS STRATEGY WITH HOSHIN KANRI

方針管理

hoshin

Direction

kanri

management, control

Hoshin Kanri



If you can't describe what you're doing as a process, you don't know what you're doing!

W. Edwards Deming

"In God we trust, all others (must) bring data".

C
A
T
C
H
B
A
L
L

PD
AC

Establish Organizational VISION

- Why?
- Purpose, Vision, Values, Mission, Marketing Positioning

Define BREAKTHROUGH STRATEGIC Objectives

- What?
- Horizon: 1-3 years
- Focus on maximum of 5 disruptive objectives
- Measure straightforward key business results

Develop ANNUAL Objectives

- How?
- Include 100% of personnel on creation of the action plan
- Plan capacity to develop capability and resources
- Prioritize based on cost of delay
- Utilize catchball: Short cycles of design thinking

Hoshin Kanri DEPLOYMENT

- Institutionalize to become the common goal for everybody
- Make it relevant: Big event - Easy access to playbooks

Execute with PRECISION

- Excellence: Deliver state of the art engineering
- Make it better: Seek relentless improvement

MONTHLY Review

- Focus on progress: Inspect, retrospect and adapt
- Management: Keep them focused on the future

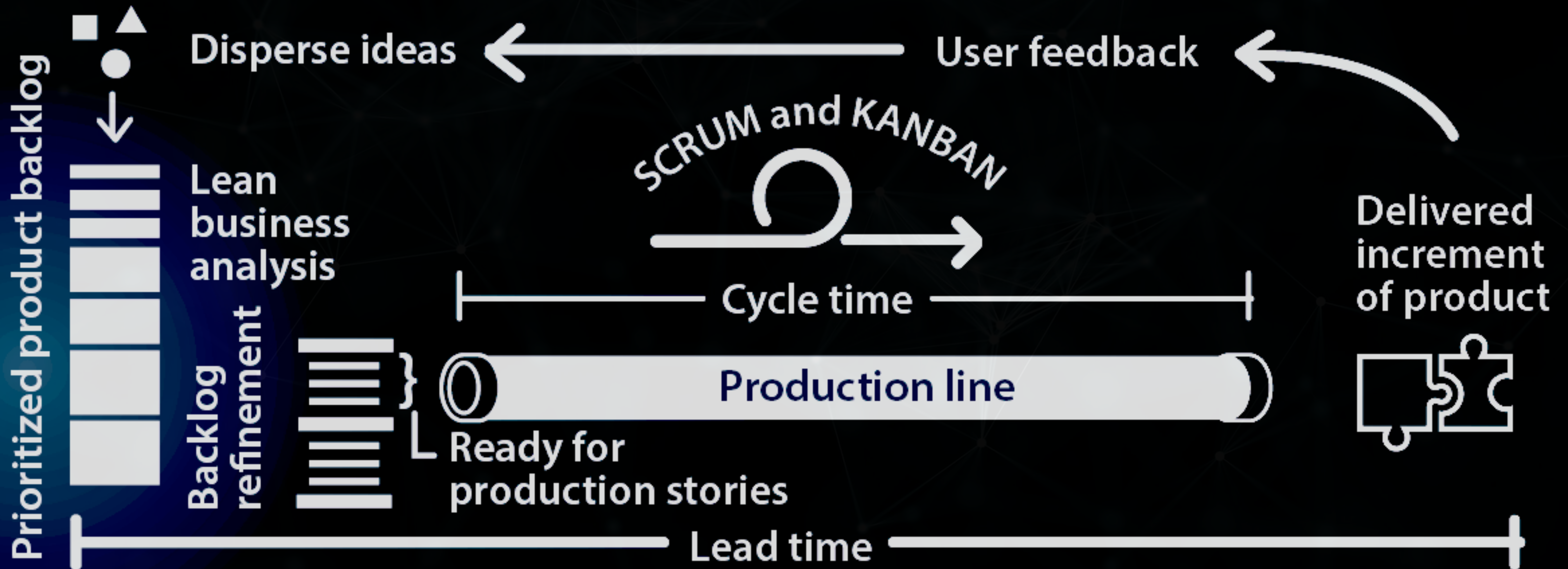
ANNUAL Review

- Celebrate and repeat the cycle



MANAGEMENT LAYER

Break down BUSINESS GOALS



Break down **BUSINESS GOALS**

User Stories - Canonical Model

As a **<persona>**, I want to **<action>**, so that I have **<value>**

A user story is a reminder about a conversation that has to take place between the team and the customer, in order to achieve mutual understanding of how to design, build, test and deliver a piece of technical solution.

Stories should be **INVEST**

- I - Independent
- N - Negotiable
- V - Valuable
- E - Estimable
- S - Small
- T - Testable

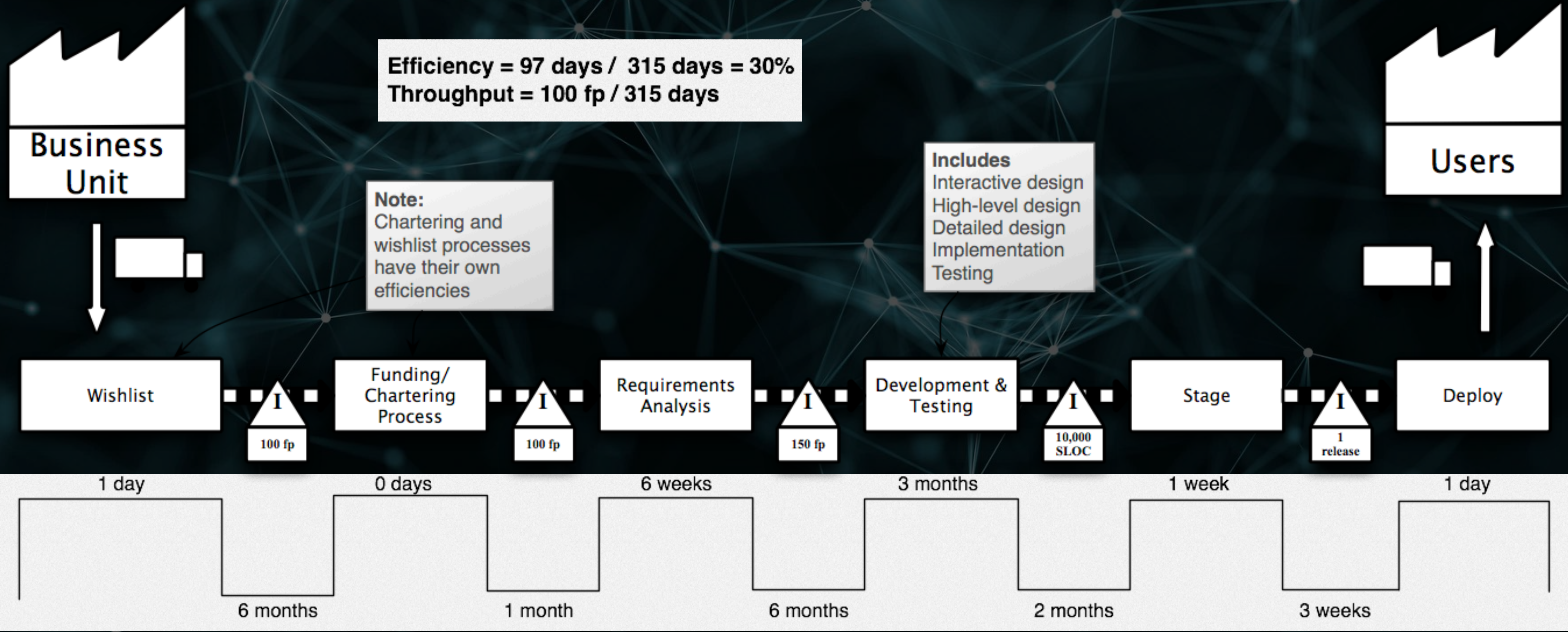
Stories are composed by:

- Title/Description
- Priority
- Acceptance criteria
 - BDD Style (given, when, then)
- Estimates (optional)
- Constrains (optional)



MAP THE VALUE STREAM

MAP THE VALUE STREAM FROM CONCEPT TO CASH





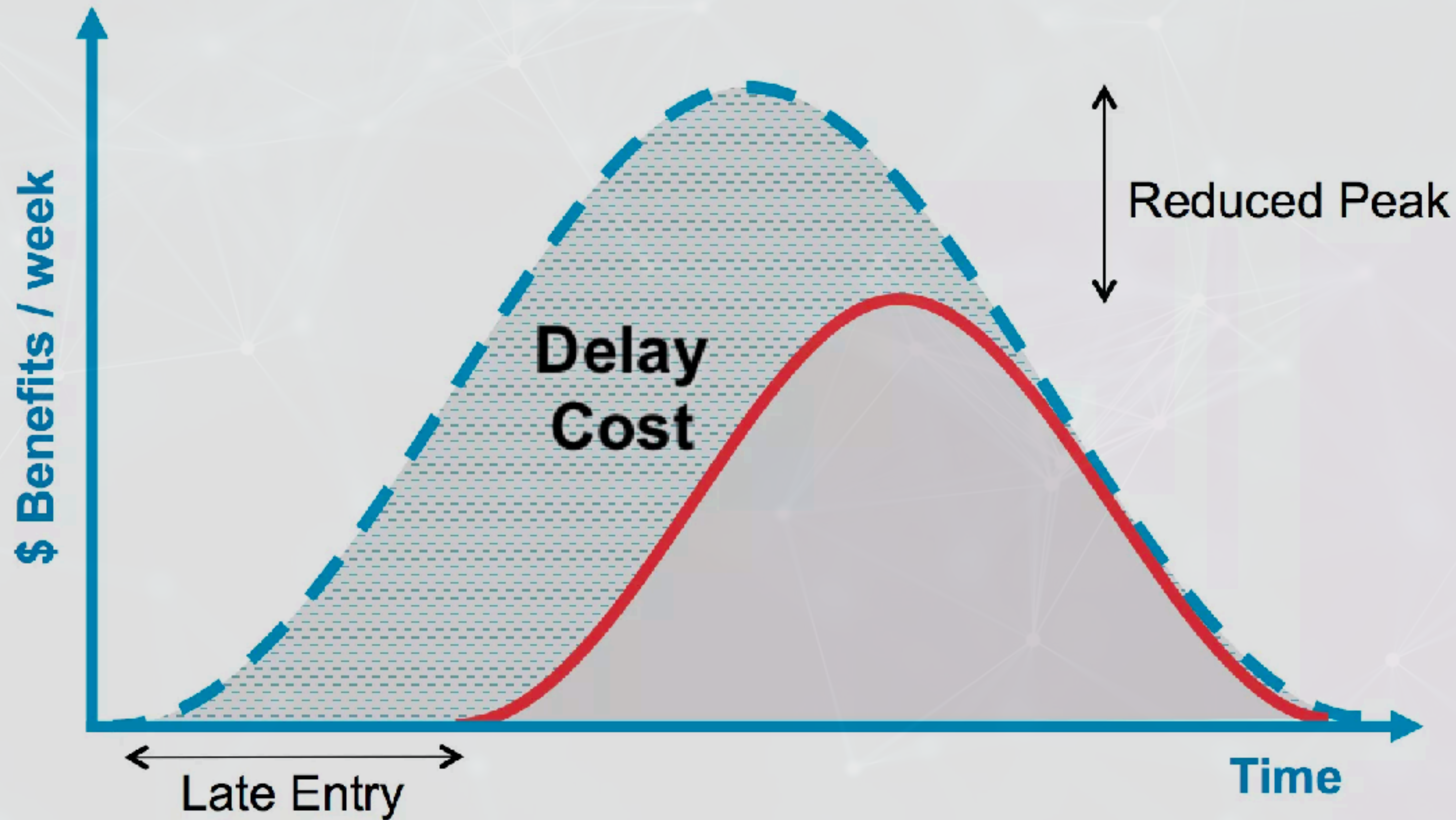
SHAPE AND PRIORITIZE
DEMAND THROUGH
ECONOMICS

UNDERSTANDING FLOW COST

- Cost of coordination
- Cost of transaction
- Cost of holding
- Cost of delay

COST OF DELAY

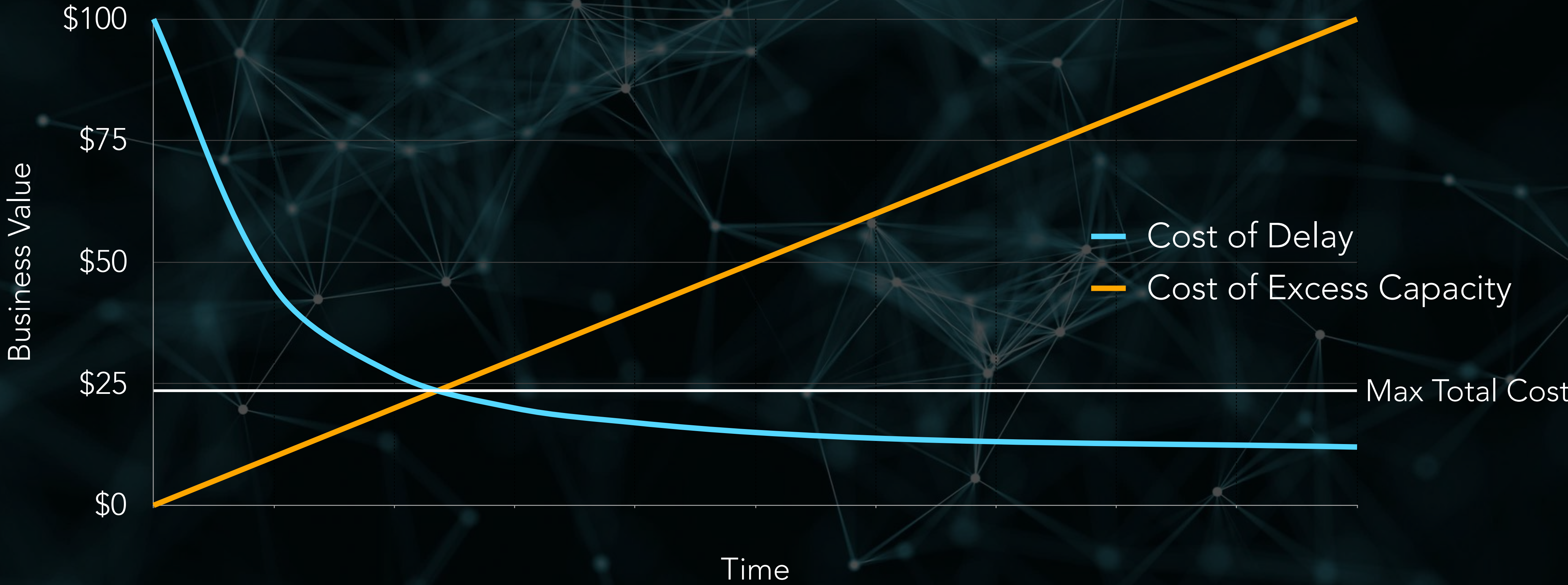
Cost of delay is the lost of opportunity when you delay delivery.



Short benefits horizon, and reduced peak due to late delivery

MAXIMIZE THE

BUSINESS VALUE





PULL TO PRODUCTION
ACORDING TO CAPACITY

UNDERSTAND CAPACITY

- Analyse throughput to know your velocity
- Forecast based on throughput
- Manage queues to help eliminating Muri and increasing profit
- Adjust batch size to minimize production costs and maximize profit
- Enable smaller batches and exploit variability
- Sequence work correctly:
 - *FIFO - First in First Out - For low variability linear production flows
 - *WSJF - Weighted Shortest Job First - For non homogenous flow in product development

Small batches improve QUEUE TIME

Longer queues

Longer cycle time

Lower quality

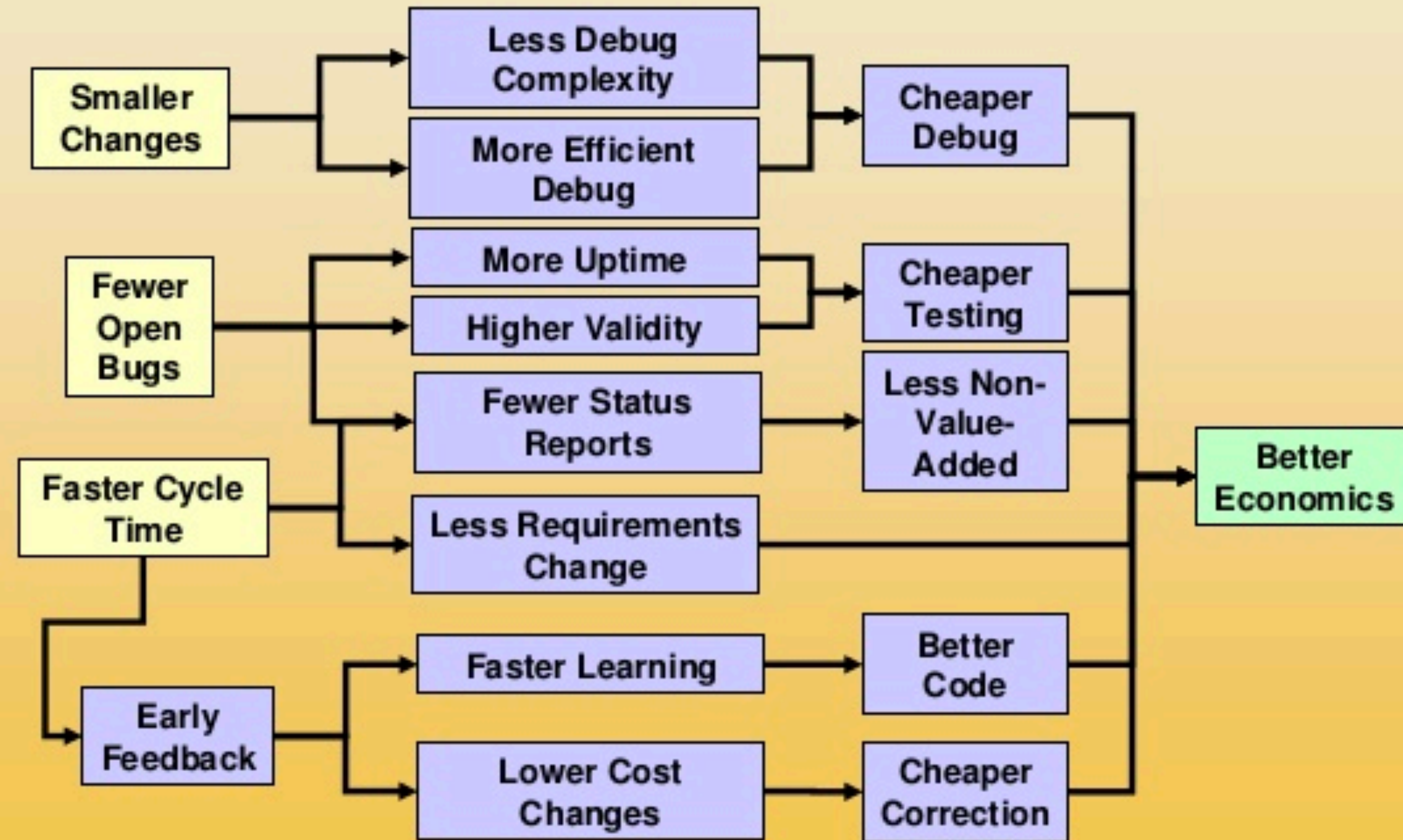
More variability

Increased risk

More overhead

Less motivation

Benefits of Small Batch Testing



Copyright 2015, Reinertsen & Associates

23

Managing queues is the key to improve product development economics.

MANAGE SYTEM LOAD TO

OPTIMIZE THE FLOW





LIMIT

WORK IN PROGRESS

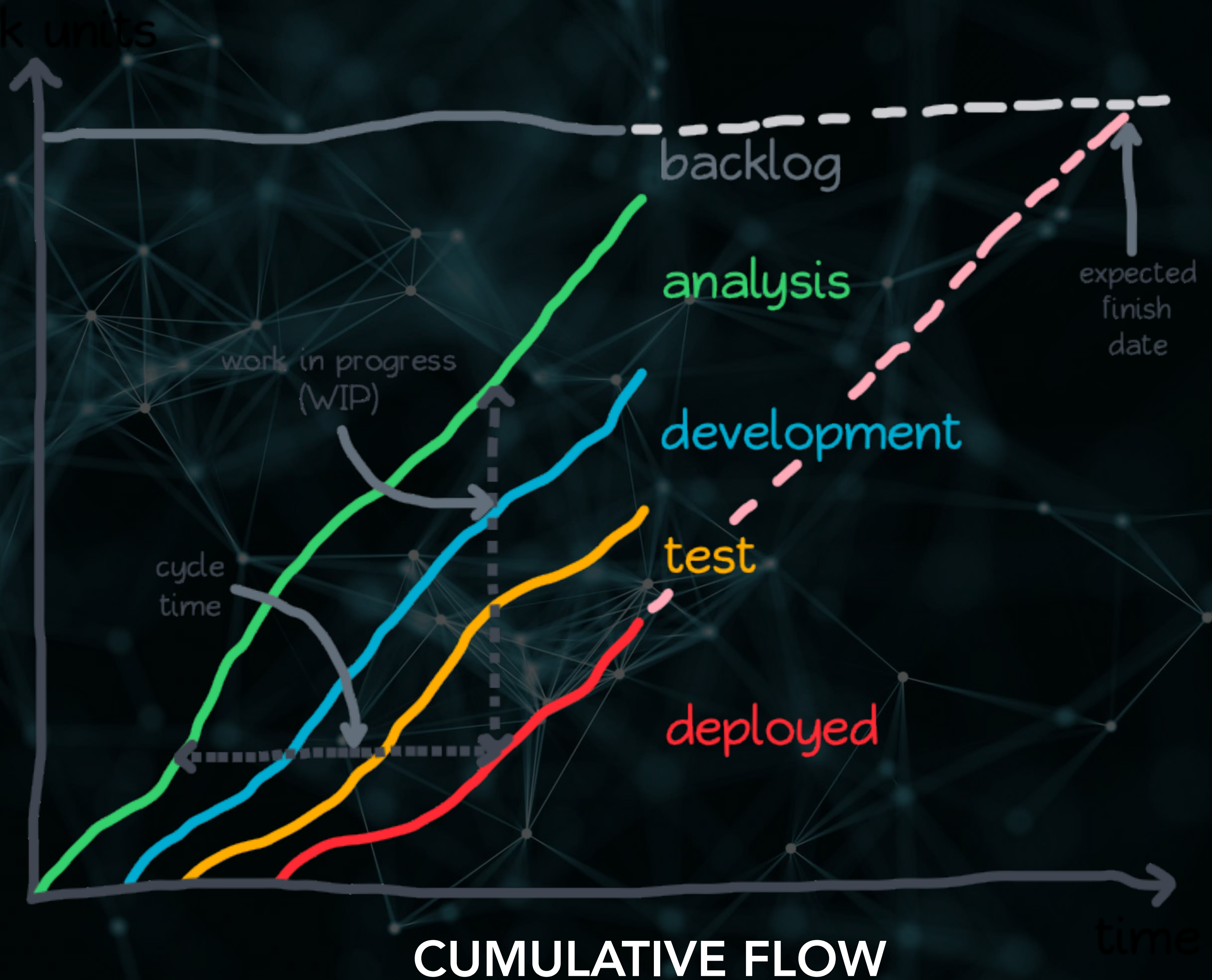
WIP LIMIT CAN BE

- **Local** - Just one phase of the production line
- **Regional** - One or more phases of the production line
- **Global** - The entire production line

Little's law

Throughput = WIP / Cycle time

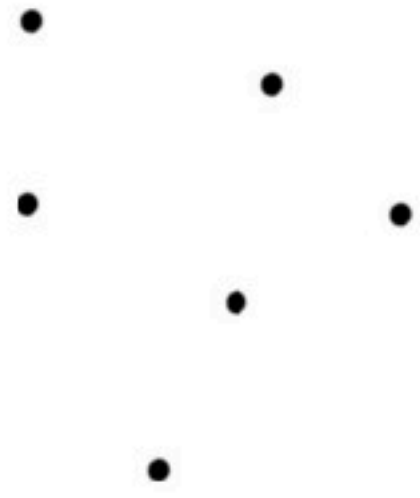
Cycle time = WIP / Throughput



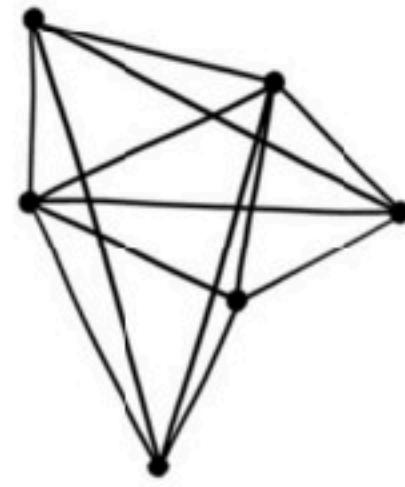


**APPLY SYSTEMS THINKING
TO IMPROVE THE WHOLE**

TOOLS OF A SYSTEM THINKER



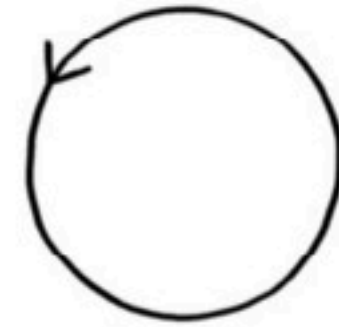
DISCONNECTION



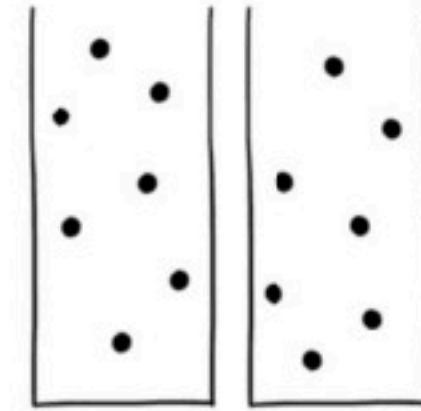
INTERCONNECTEDNESS



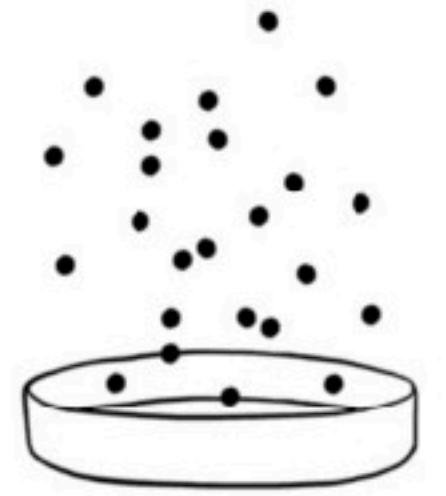
LINEAR



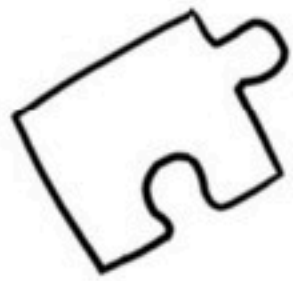
CIRCULAR



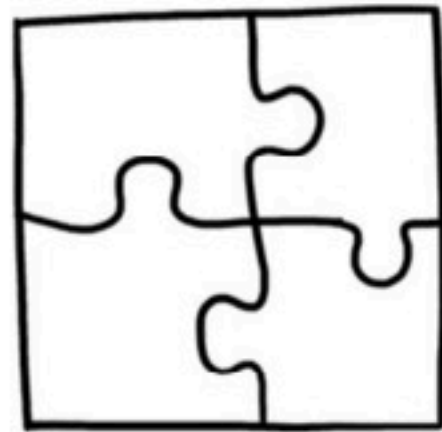
SILOS



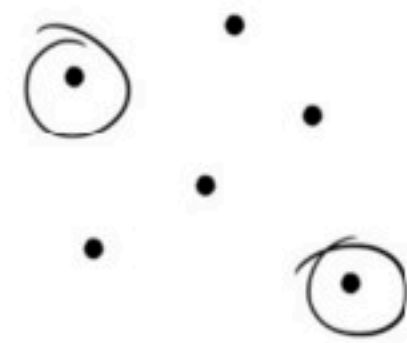
EMERGENCE



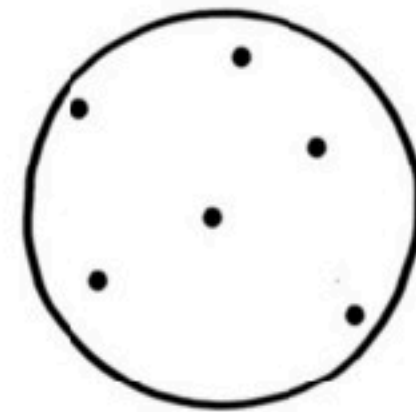
PARTS



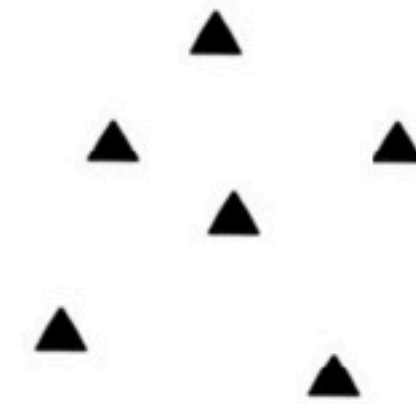
WHOLES



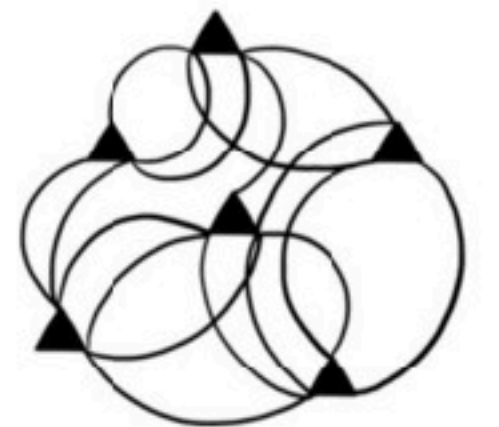
ANALYSIS



SYNTHESIS



ISOLATION

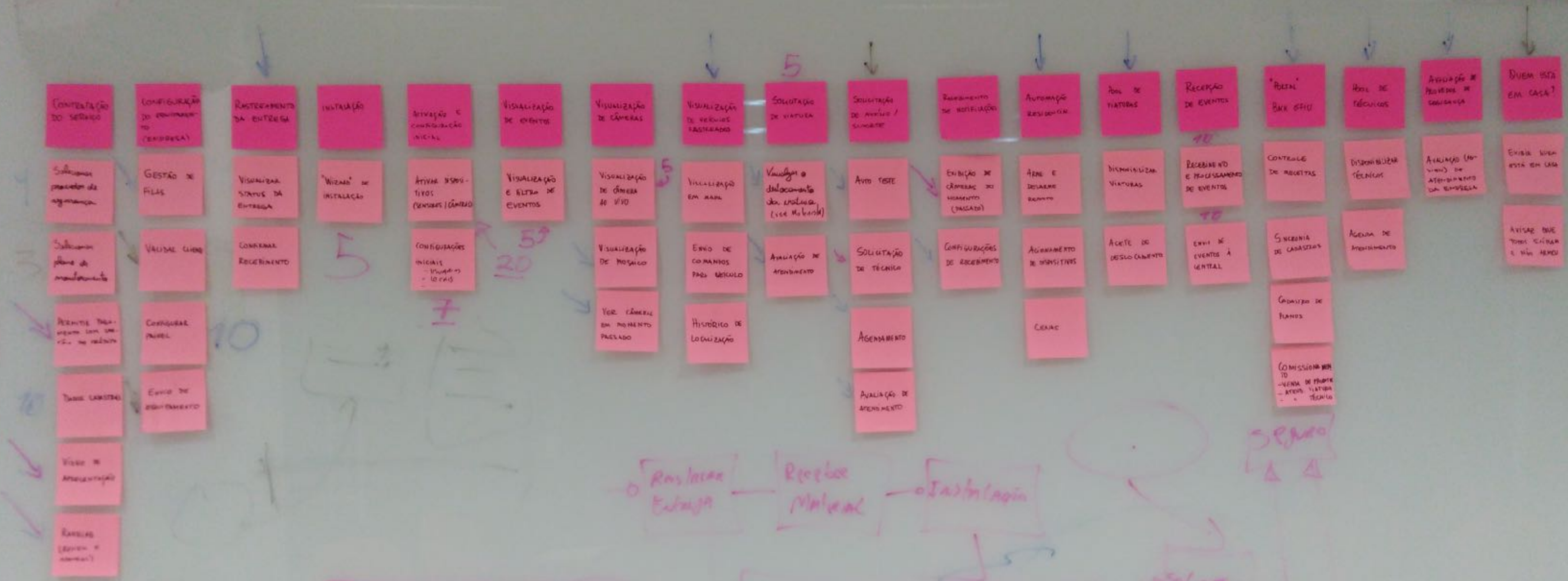


RELATIONSHIPS



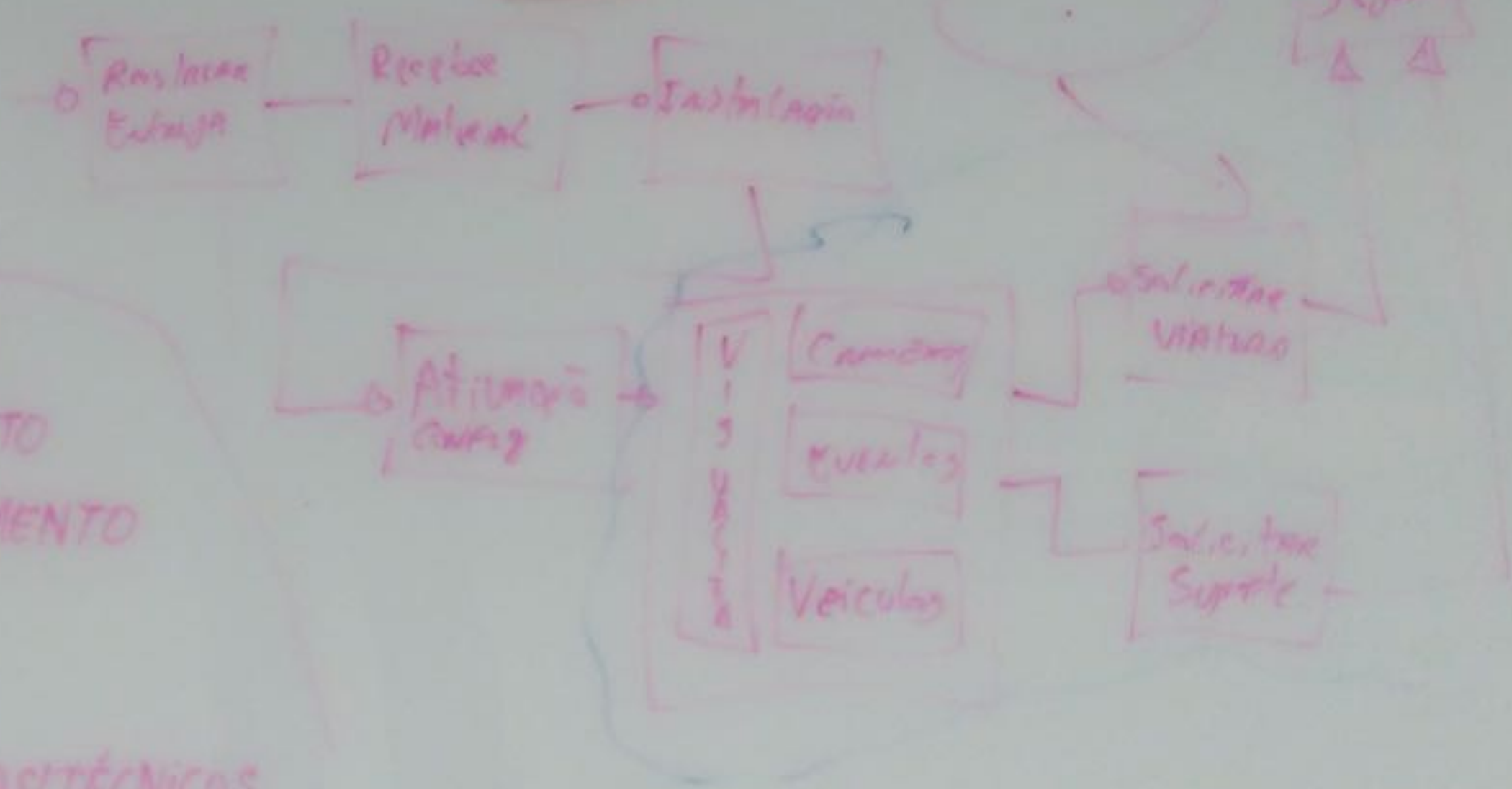
**VISUALIZE THROUGHPUT
TO MANAGE THE FLOW**

Story Mapping



RISCOS

- ACORDOS COMERCIAIS
- COMPLEXIDADE DO PRODUTO
- EXPERIÊNCIA NO SECTOR DO CHAMPION ♥
- EXPERIÊNCIA INSTALAÇÃO/ATIVAÇÃO
- PRESSÃO DE INOVAÇÃO
- TECNOLOGIA
- ADESAO DE VIATURAS/TÉCNICOS



SEMPRE

ANÁLISE
READY FOR DEV

DIGITAL
CONSULTE OS ANEXOS
PROCESSOS
USUÁRIOS

SPRINT
BACKLOG

EM DEV

READY TO VALIDATION

VALIDATION

READY TO DEPLOY

PIPELINE

RISCOS
BACKLOG DOING

DONE

ATC 715468
ESTILO DO PLACEHOLD
SP3

ATC 715936
ALTERAÇÃO ESTILO
MA DE DIVS DO CABE
SP3

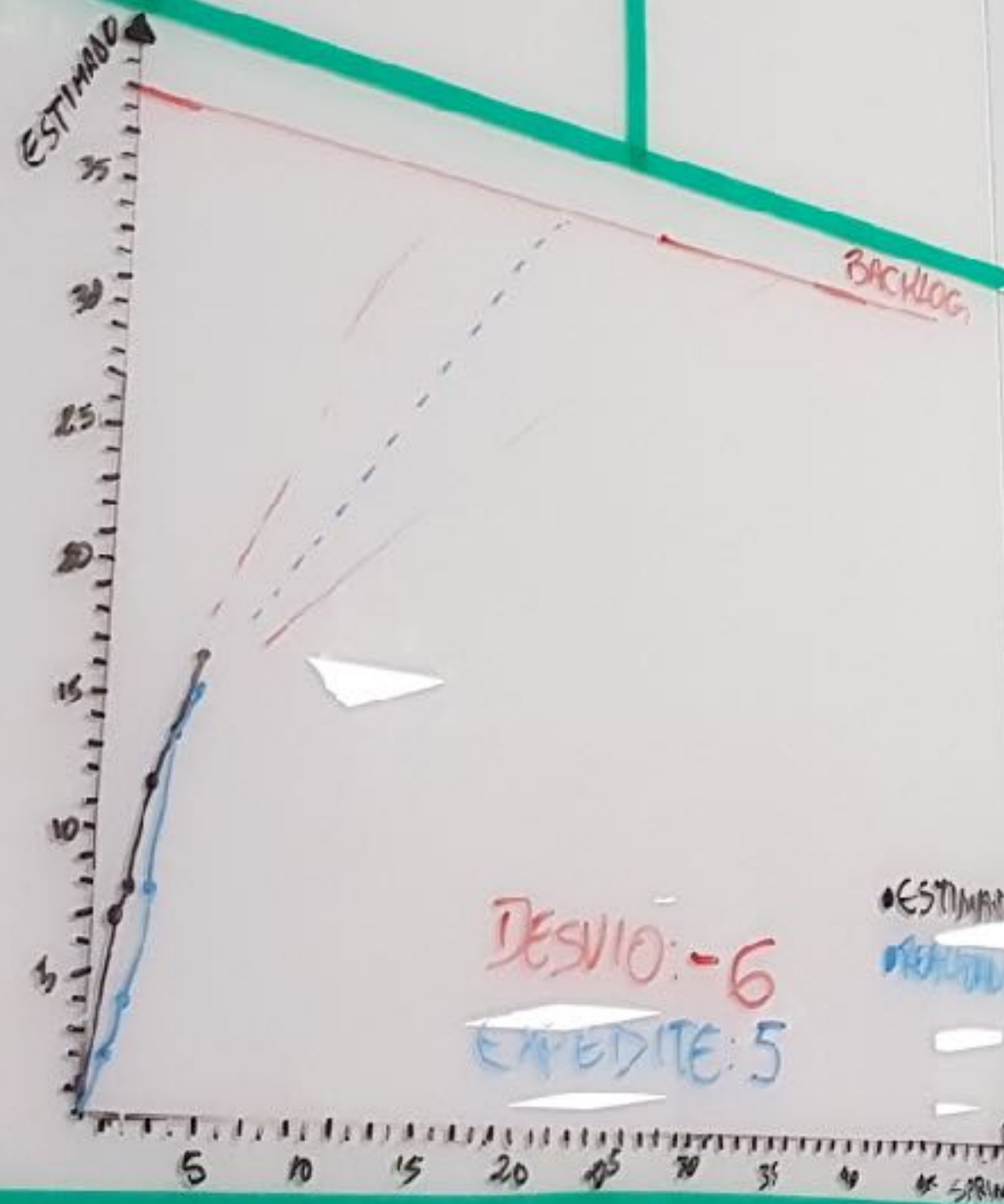
Bônus Ações da
Fila e Campo
de Processo
(Correção)
116889

CORREÇÃO
116889

ATC 115249
CORREÇÃO DE ERRO
NA TELA DE CADASTRO
DE USUÁRIOS

ATC 114280
CORREÇÃO DE ERRO
NA TELA DE CADASTRO
DE USUÁRIOS

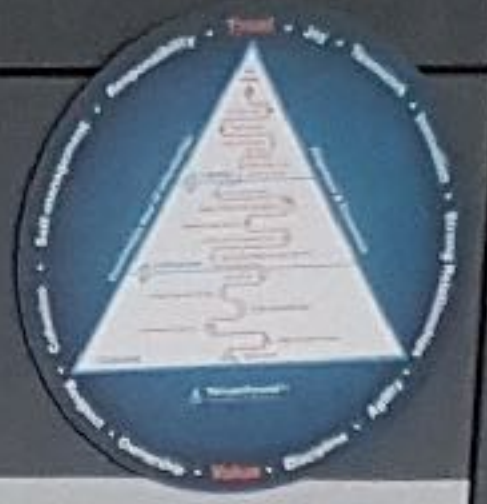
	ESTIMADO	REALIZADO	DESVIO	EXPEDITE
1	7	2	-5	2
2	1	2	+1	0
3	4	4	0	0
4	2	6	+3	1
5	3	2	-3	2
6	3			
7				
8				
9				
10				
11				
12				
13				
14				



ONDE QUEREMOS
CHEGAR

TECHNICAL
STORY • NEGÓCIO OK!

OKR LEAN



TO DO

DOING

TO EVALUATE

DONE

<25%

<50%

<75%

ASSISTENTE DIGITAL

ASSISTENTE DIGITAL

PROTESTO

LAB
SUSTIA

Velocidade
Utição
Cycle time
RTF, CEO
INDICADORES

Backlog do
Produto
Priorizando

Aplicação de testes
defeitos por ambiente
& garantia de build

50% das classes
Públicas
Refatoradas

CPDs visuais
& Automatizados

A3 Report
Análise de
Causa Raiz

Completude
Cobertura de
testes e testes
de Load

Tudo o que
está no backlog

0 teste de código
aplicado

0% de cobertura
de código
(sem análise)

Testes unitários
90% de cobertura
de código

0 cobertura
por teste

Continuos
Delivery

Acrescimo de
trabalho
visíveis

Uso da
Estimativa de
e Deploy

Integração
CONTINUA

Participação
em
CODE

Kanban
Board

CLICK
Deploy

Always
Shippable

Pull System

0 Violações
de Código

TDD
Aplicado

50% das classes
Públicas
Refatoradas

Velocidade
Utição
Cycle time
RTF, CEO
INDICADORES

CPDs visuais
& Automatizados

Análise de
Causa Raiz

A3 Report

Acrescimo de
trabalho
visíveis

CPDs visuais
& Automatizados

Completude
Cobertura de
testes e testes
de Load

TDD
Aplicado

Tudo o que
está no backlog

0 Violações
de Código

0 teste de código
aplicado

Uso da
Estimativa de
e Deploy

ONE
CLICK
Deploy

Backlog do
Produto
Priorizando

Kanban
Board

0% de cobertura
de código
(sem análise)

Always
Shippable

Uso da
Estimativa de
e Deploy

CPDs visuais
& Automatizados

A3 Report

Análise de
Causa Raiz

Completude
Cobertura de
testes e testes
de Load

Tudo o que
está no backlog

0 teste de código
aplicado

0% de cobertura
de código
(sem análise)

Testes unitários
90% de cobertura
de código

Uso da
Estimativa de
e Deploy

Integração
CONTINUA

Participação
em
CODE

Kanban
Board

CLICK
Deploy

Always
Shippable

Pull System

0 Violações
de Código

TDD
Aplicado

Aplicação de testes
defeitos por ambiente
& garantia de build

Uso da
Estimativa de
e Deploy

Tudo o que
está no backlog

0 teste de código
aplicado

0% de cobertura
de código
(sem análise)

0 teste de código
aplicado

Kanban
Board

ONE
CLICK
Deploy

CONTINUOS
Delivery

Always
Shippable

0 Violações
de Código

0% de cobertura
de código
(sem análise)

0 cobertura
por teste

Uso da
Estimativa de
e Deploy

Integração
CONTINUA

Participação
em
CODE

Kanban
Board

CLICK
Deploy

Always
Shippable

Uso da
Estimativa de
e Deploy

Completude
Cobertura de
testes e testes
de Load

Tudo o que
está no backlog

0 teste de código
aplicado

0% de cobertura
de código
(sem análise)

Testes unitários
90% de cobertura
de código

Uso da
Estimativa de
e Deploy

Integração
CONTINUA

Participação
em
CODE

Kanban
Board

CLICK
Deploy

Always
Shippable

Uso da
Estimativa de
e Deploy

VALIDAR

FLUXO

PROCESSO

GESTÃO
VISUAL

MÉTRICAS

VALIDAÇÃO

KEY POINTS

- Promax
 - MIMO: não pagar
 21/10/10: Adição
 22/10/10: Adição
 23/10/10: Adição

- MIMO: não pagar
 21/10/10: Adição
 22/10/10: Adição
 23/10/10: Adição

- MIMO: não pagar
 21/10/10: Adição
 22/10/10: Adição
 23/10/10: Adição

Obrigação
 Contabilidade
 U/RDA
 Fase I
 03/11/10

T4
 Omg Venda
 T2
 Omg FISCAL
 T3 Omg
 FISCAL/ADM
 AK 05/10-18/10

SPDV integração
 NFC-e e SAT
 - Promax
 - MIMO: não pagar
 21/10/10: Adição
 22/10/10: Adição
 23/10/10: Adição

FISCAL: Pauta mínima
 Rever tabela
 CEST convênio 5/2006
 49/2016
 zona oficial/2017

Projeto SGT Trans
 1/20
 Rastreabilidade
 SGP
 - Piloto Corpeletti

Remuneração
 Brasil FL
 Remuneração
 Remuneração
 Remuneração

Credit Score
 Anbim gm
 * Abaixo em 30/09
 T2
 T1
 Verif
 11/10: não cobrada
 CRIME OK
 02/10/10
 PR

T4
 T3
 T2
 T1
 Comunic
 Promoc
 Validades Rika
 Aguardando
 retorno ZDA
 e-mail: 22/09

T5
 T2
 T1
 T4
 T3
 T2
 T1
 Apoio
 03/10
 AGUARDANDO
 material
 e HISSIS

Remuneração
 FARID Rahmex Norte
 - T 13/10: Unifb
 - T 14/10: taxim, 30/09

Multaite Aa Norte
 - Tarifa: 18159
 Ajustes prog
 AL ch com Pacientes

T5
 T4
 T3
 T2
 T1
 RDA T5
 Painel Produti-
 RDA Suporte
 OK

T4
 T3
 T2
 T1
 Revisao
 PROMISSAS
 GM 11/10-13/10

Novo GOAD
 P/ RDA
 GM
 AGUARDAR
 PILOTO P/
 SEXTA
 GM 17-10
 GM 14/10-

T4
 T3
 T2
 T1
 Complementos
 Chamado: 78112
 0800net

T4
 T3
 T2
 T1
 Contato inicial
 +
 Promissas



Média

Baixa

Logo 3D
Diego

PRIORITY PIPELINE →

Underwork
Em Progresso

Trade Sales Force
30 days

Retomar Contato de SEARA Assess Abril no processo	Retomar Contato de SOS Cardio	Completar Proposta Atk Pais X/5	Imprimir e enviar a convite de Pais X/5	Enviar Planilha de Comissão On The Always of Dyane 15/7	Requisitar Indicador Linha	Atualizar Planilha de Comissão	Atualizar Planilha de Comissão	Atualizar Planilha de Comissão	Atualizar Planilha de Comissão	Atualizar Planilha de Comissão	Atualizar Planilha de Comissão
---	-------------------------------	------------------------------------	---	--	----------------------------------	--------------------------------------	--------------------------------------	--------------------------------------	--------------------------------------	--------------------------------------	--------------------------------------

Requisitar
Lançamento
de Logo

Requisitar
Comercio
Call Atk

Requisitar
Story
Call Atk

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão



F5

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

Atualizar
Planilha
de Comissão

JUNTE-SE AO MUNDO AZUL

A large Kanban board with a black background and yellow column borders. The columns are labeled at the top: 'CANDIDATO RELEVANTE', 'ENQUISA', 'ANALISE DO GESTOR', 'ENTREVISTA DE CASA', 'ENTREV. SKYPE/EGRATINA', 'ENTREVISTA', 'TRAB. LAUDO', 'ENTREV. GESTOR PLATEAU', 'ANALISE APROFUNDADA', 'SOLICITAÇÃO', and 'ADM'. A red horizontal bar spans across the bottom of the board. On the left side, there are sections for 'SINALS DE PROBLEMA', 'LIXEIRA', 'PROXIMAS VAGAS', and 'VAGAS EM PAPELA'. A sad face icon is in the top left, and a happy face icon is in the top right. The board is filled with various colored sticky notes (yellow, orange, pink, blue, green) representing tasks in different stages.

A smaller Kanban board with a black background and yellow column borders. The columns are labeled: 'TO DO' (with a sad face icon), 'ATRAÇÃO E SELEÇÃO', 'GESTÃO', 'ENDOMARKETING', 'DIAGNÓSTICO', and 'REUNIRIAÇÃO'. Below these are 'IN PROGRESS' (with a happy face icon), 'WIP', 'DONE', 'IMPEDIMENTOS', and 'FROZEN'. The board is filled with sticky notes in various colors (green, purple, blue, orange, yellow, pink). A red box highlights the 'IMPEDIMENTOS' column. A white box highlights the 'WIP' column. A red box highlights the 'EXPEDITE' label within the 'IN PROGRESS' section.



IF(\$RESULTADO > 300) {
 \$GRAFICO = \$A3 + \$B377;
}

13/03
 LIMITE MINIMO
 ATINGIDO

4
 APARECIMENTO
 DA CANETA
 ROXA

19/04
 VOLTA DO
 EDSON

30/04
 LIMITE MINIMO
 ATINGIDO

13/04
 SUMICO DA
 CANETA ROXA
 ■ + ■ = ■

10/04
 PAUL PROGRAMING
 PARCELA DO AGOSTO
 NÃO ESTAVA SENDO
 RESPONDE

11/03
 PLANEJAMENTO
 VALIDAÇÃO 3.0

11/03
 STOP THE LINE
 ESTADO MINIMO
 ATINGIDO

GIT

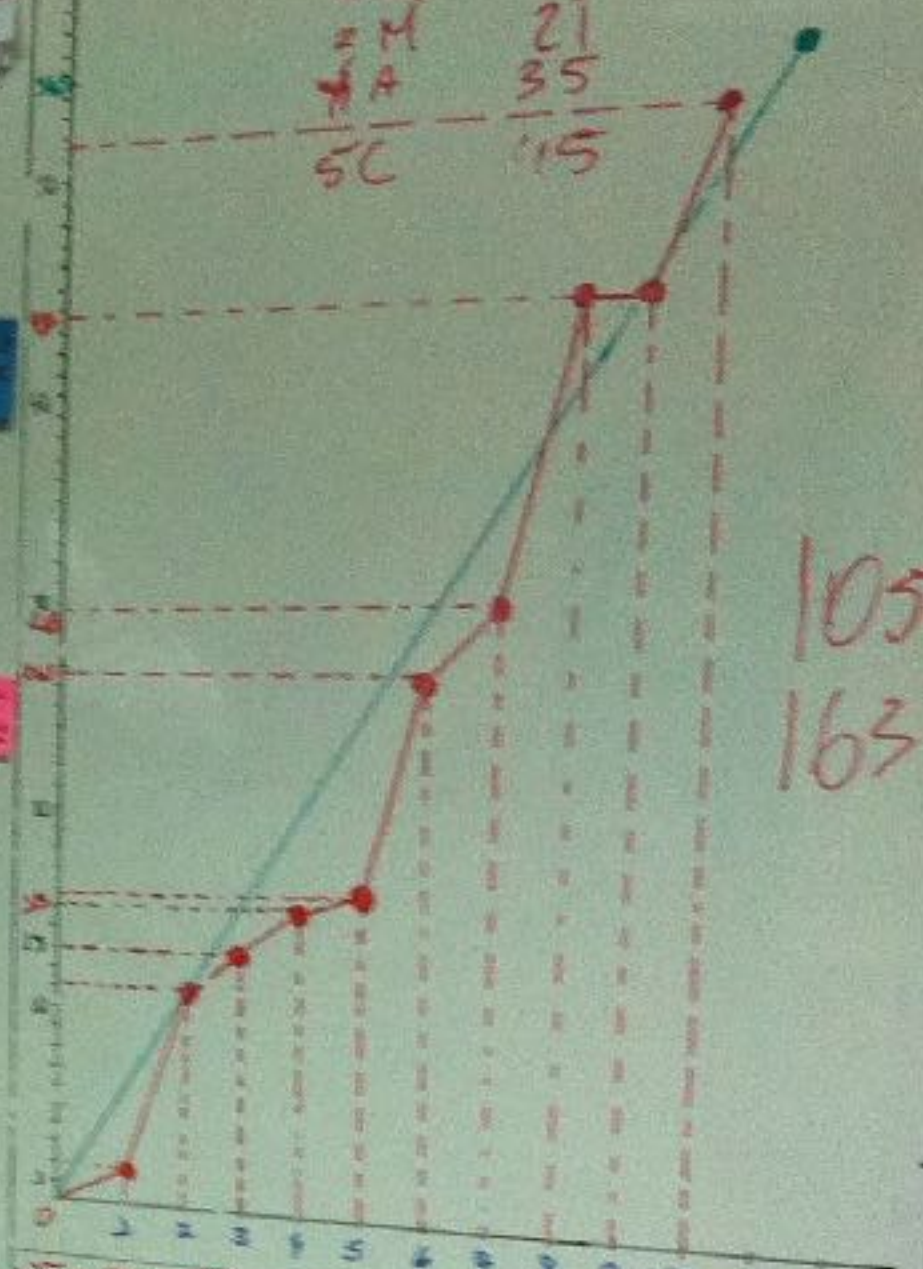
11/04
 SAIDA DO

Arquivo



FINANÇAS Em andamento

GRÁFICO 1 BC 46,5
 2 FO 15
 3 M 21
 4 A 35
 5 C 115

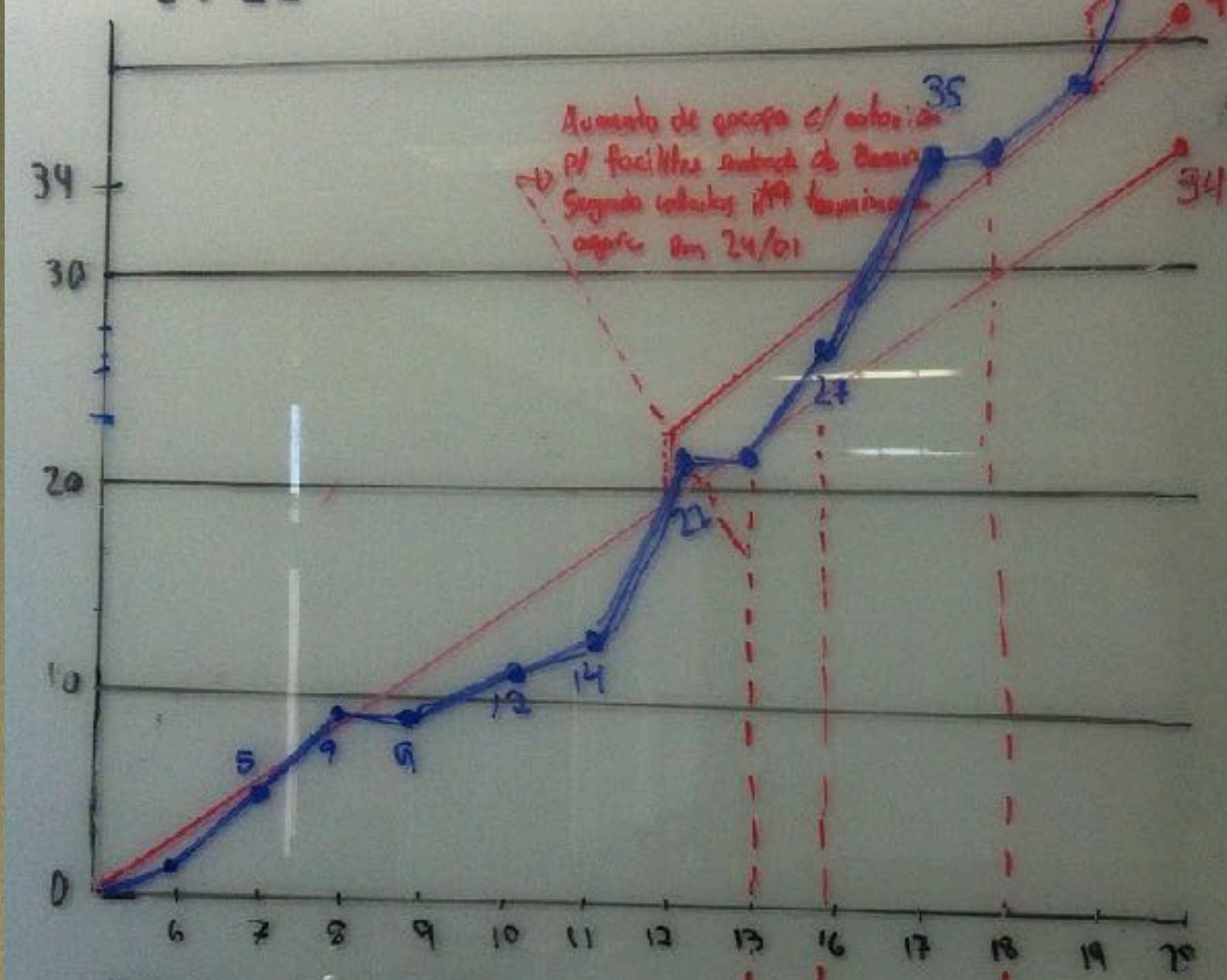


DI	EST	REAL
1	16,5	9,5
2	22	22
3	26	25
4	31	36
5	58,5	

NÃO PRONUNCIADAS NÃO ESPERAR

Repone 23/02
 500
 500
 500
 500
 500
 500
 500

IT 19



Aumento de capacidade e/colaboração
 Pl facilidade subseq de Bessen
 Segundo colabos JFF terminam
 ocorre em 24/01

lobo e mat como equipe
 lobo no fts + improvement férias mat.
 mat parcial
 lobo e roberta como equipe em cubra gda
 Entrada/acultuamente Bessen
 Bessen já despedido da equipe
 Bessen na equipe
 Mat de volta à equipe

TOP CHAMADOS

Acumulado Mês

ATENDENTES

REVENIDAS

CAMINHOS

Cemar
Farid
Alfa
COBEB
Menegazzo

07.22.23 - Div. Sefaz
Promax (INFRA)
20.05.07.01 - Matinal
07.22.11 - Rot. Especiais
03.04.20 - At. Diária

Fabiane
Adriane
Andressa
Eduardo
Larissa
Brendo
Bruno
Guilherme
Gabriel
Kelvin
Caroline

BACKLOG SUPOTE

17

Seria	Natureza	Resultado
275	61	73
89	31	17
108	7	7
256	6	2
0	2	0
	0	8
1		1

SALDO INICIAL

248

SALDO FINAL

ABERTOS

FECHADOS

LEGENDA

Suporte

Serviço

Grid of Kanban cards with columns: TO DO, IN PROGRESS, DONE. Includes various colored sticky notes (yellow, purple, orange, pink) representing tasks and their status.



ENGINEERING LAYER



DESIGN REACTIVE MICROSERVICES

UNDERSTANDING THE COMPLEXITY OF

MICROSERVICES ARCHITECTURE

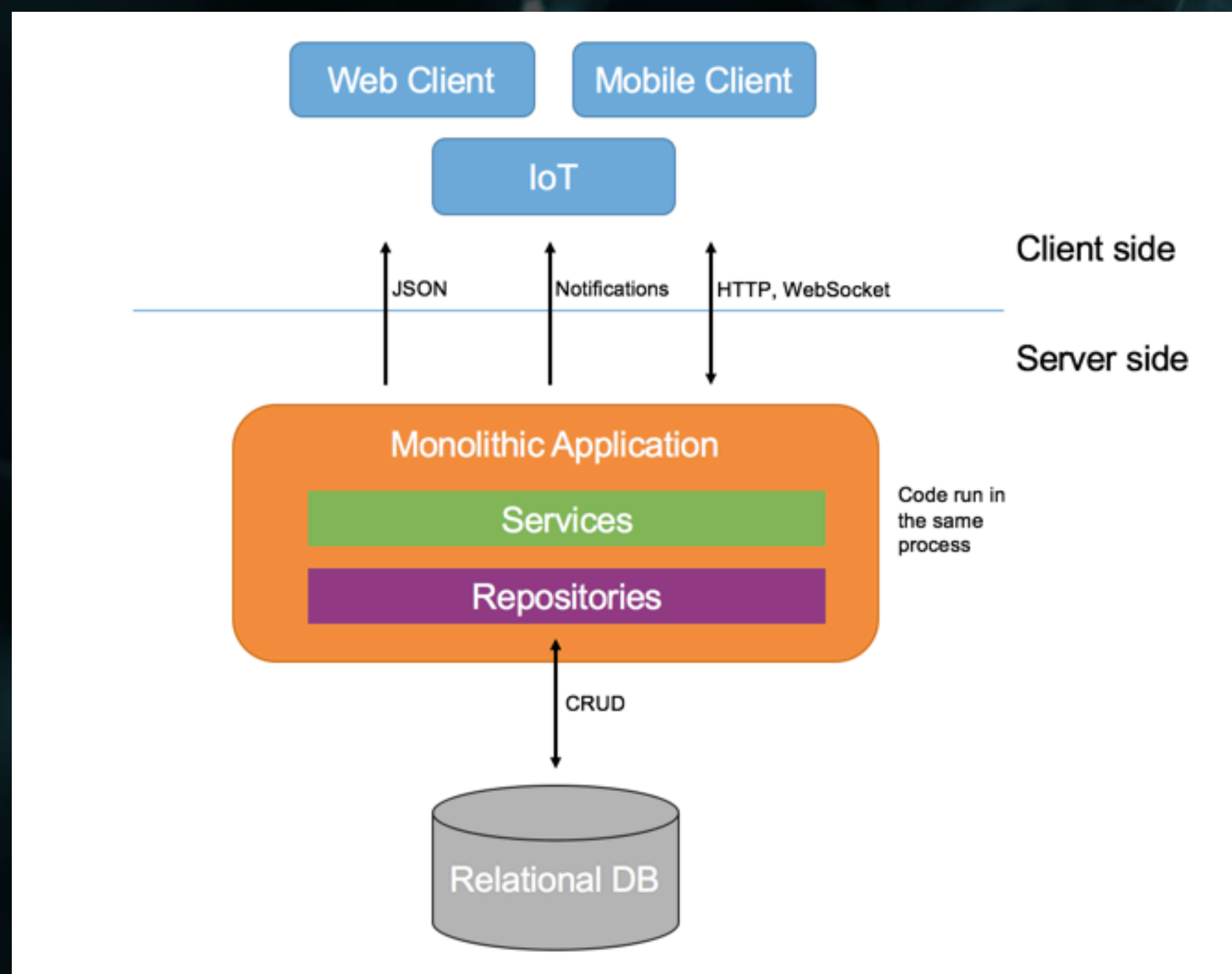
"Organizations which design systems ... are constrained to produce designs which are copies of the communication structures of these organizations."

— **Conway's Law**

UNDERSTANDING THE COMPLEXITY OF

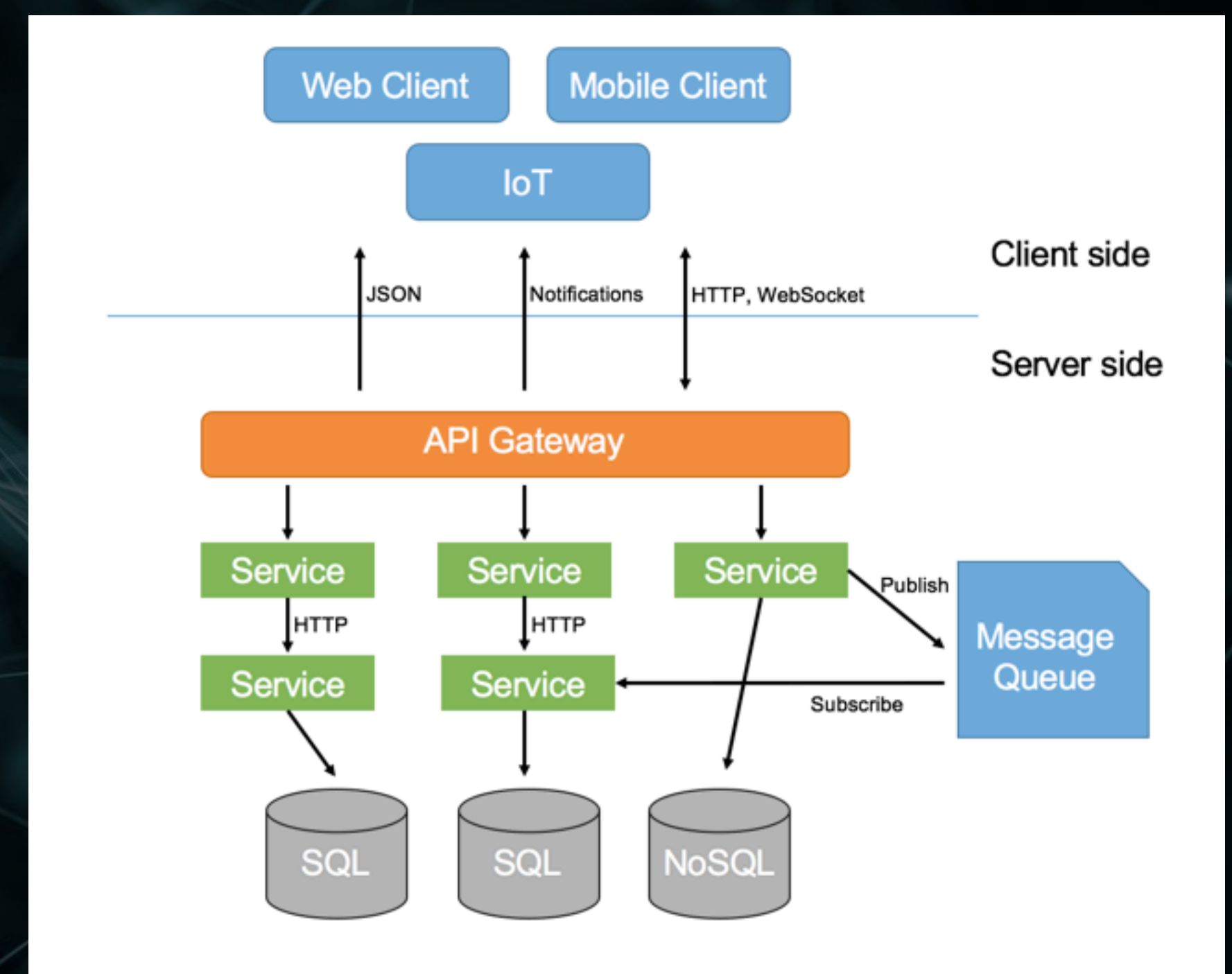
MICROSERVICES ARCHITECTURE

Monolithic



VS

Microservices



UNDERSTANDING THE COMPLEXITY OF

MICROSERVICES ARCHITECTURE

Monolithic

pros

cons

Single deploy

Longer deployment cycles

Single language

Single language

Less complexity

Difficult to scale

Easier traceability

Less business agility

Easier transaction handling

Big ball of mud

UNDERSTANDING THE COMPLEXITY OF

MICROSERVICES ARCHITECTURE

Microservices

pros

cons

Improves team communication

Increased application complexity

Increases business agility

Health monitoring and debugging

Different languages

Different languages

Independent deployments

Many moving parts

horizontal scaling

Orchestration challenges

CHARACTERISTICS OF

MICROSERVICES ARCHITECTURE

Zero configuration	One click setup => test => deploy
Auto-discovery	Service orchestration discovers and communicates with existing services
High redundancy	Up and down auto-scaling
Self-healing	Recreation of failed services without manual intervention
Fault-tolerant	Requests should not be rejected until self-healing mechanisms kickoff



CODE TO VALUE
JUST IN TIME
WITH TDD

CODE TO VALUE

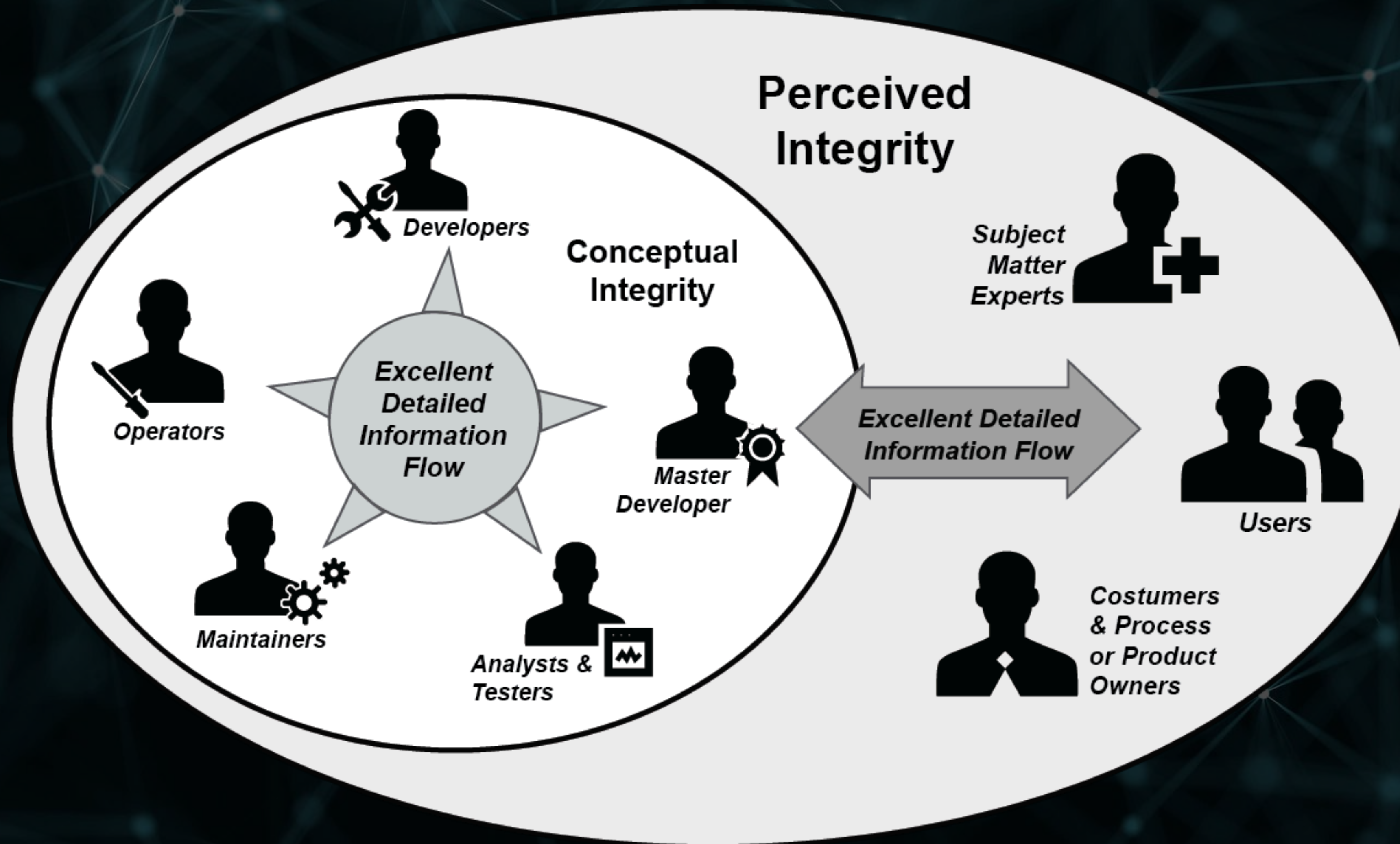
Rule #1

No code should be written unless there is a well defined and very clear understanding of the value that is expected to be generated by the code.

Rule #2

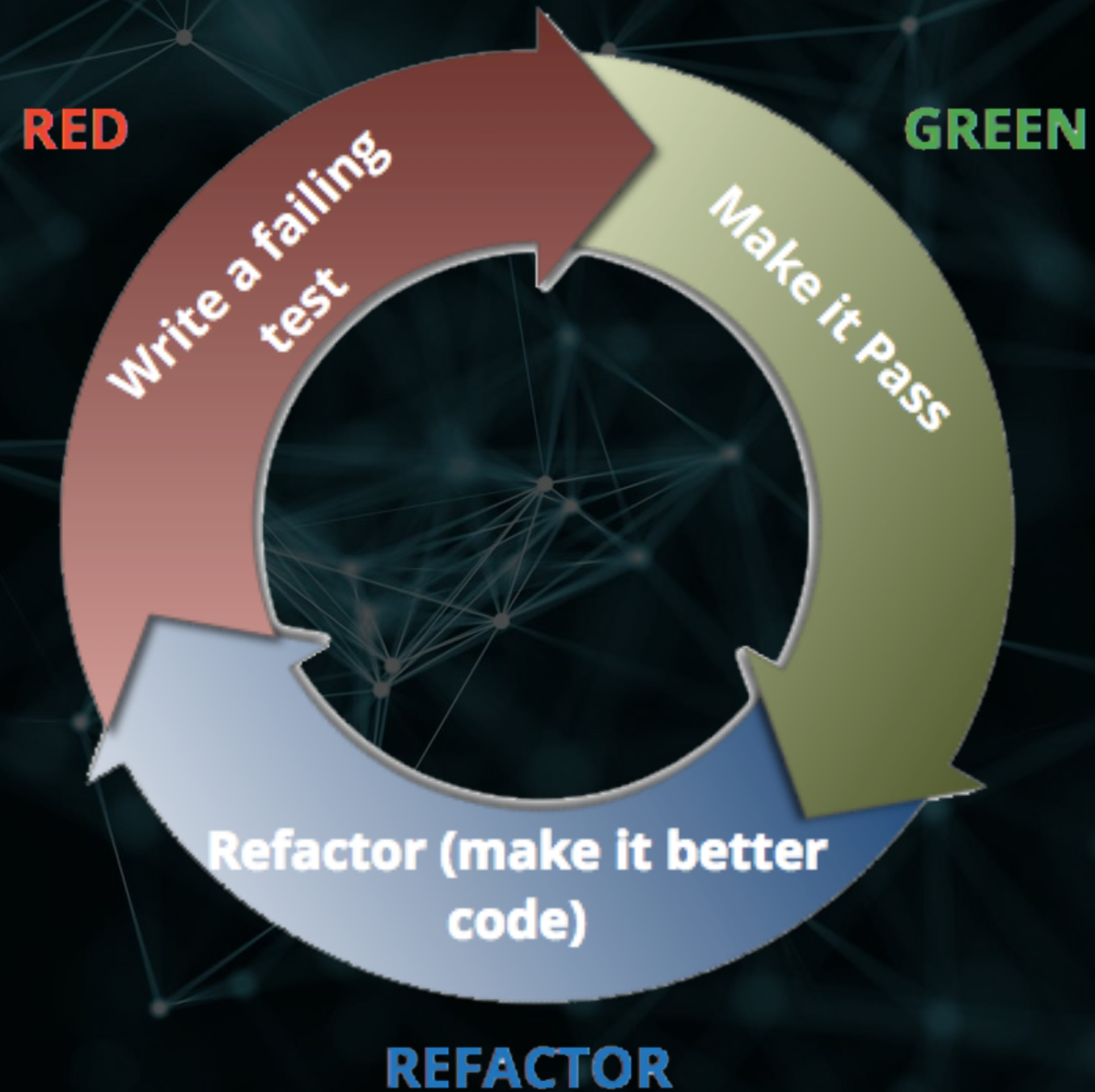
No code should be allowed in the repository, unless the actual value being generated by the code in production matches the expected value.

BUILD INTEGRITY IN



The Evolutionary Nature of Software

Test first from acceptance definition to TDD
The magic red green refactor cycle



UNDERSTANDING

CLEAN CODE

- Naming
- Sizing
- Coding standards
- Abstraction
- Functional programming
- Code documentation
- Shared ownership
- Always shippable
- Dry
- KISS
- Code smells

SOLID

- Single Responsibility
- Open for extension, closed for modification
- Liskov substitution principle
- Interface Segregation
- Dependency Injection



**AUTOMATE TEST
EARLY WITH JIDOKA**

DIFFERENT TYPES OF THE

SOFTWARE TESTING APPROACHES

Manual or Automated

- Functional
- Unit
- Component
- Integration
- Acceptance
- Behaviour
- Mutation
- Manual

Exploratory Testing

- Usability

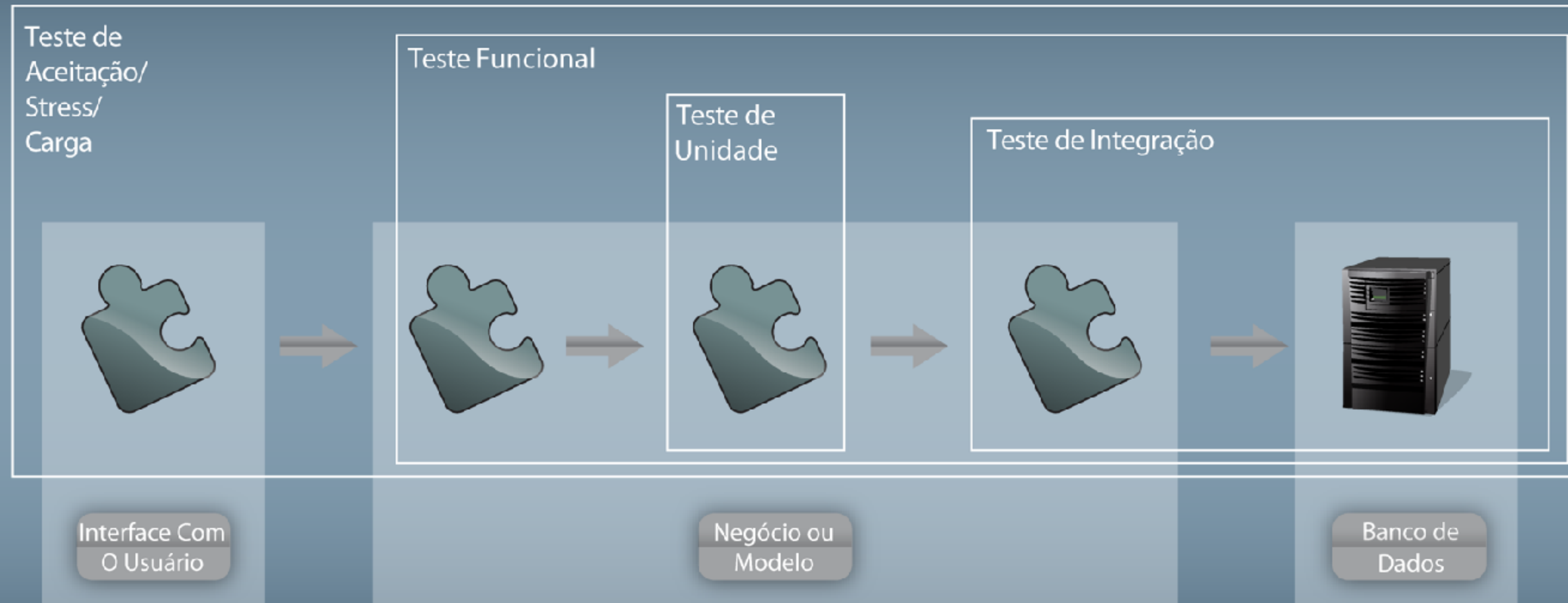
Tool assisted

- Performance and Load testing
- Security
- Fault tolerance

SIMPLE ARCHITECTURE FOR

SOFTWARE TESTING

◆ Arquitetura de Testes Automatizados





AUTOMATE
THE POWER OF JIDOKA

The Power of Jidoka

Benefits of automation

Safety

high quality

productivity

knowledge management

The payoff of automation

Automate The Power of Jidoka

Opportunities for **Automation**

- Test automation
- Automated dependency management
- Automated database management
- Automated monitoring
- Continuous Integration
- Continuous delivery
- Virtualizing environments
- Seamless deployment
- Scaling in the cloud

Automate The Power of Jidoka




JUST IN TIME ARCHITECTURING

Sustainable **Unfair** Advantage

A great software architecture provides a technically sophisticated, hard to duplicate, sustainable unfair competitive advantage.

Just In Time Architecturing



Emerging **Just in time** Architecturing

Enable micro services
Use Componentization
Foment Federated architectures

Just In Time Architecturing



Cost Optimization

Reliability
Predictability
Performant
Testability
Scalability

Just In Time Architecturing

Architecture Premises

1

KISS

KEEP IT STUPIDLY SIMPLE

2

PERFORMANT

FAST ENOUGH

3

TESTABILITY

FULLY AUTOMATED

UNIT TESTING

COMPONENT TESTING

FUNCTIONAL TESTING

ACCEPTANCE TESTING

4

ALWAYS SHIPPABLE

RETROCOMPABILITY

CONTINUOUS INTEGRATION

CONTINUOUS DELIVERY

AUTOMATED DEPLOYMENT

AUTOMATED MIGRATION

CLEAN CODE

5

SCALABILITY

LOAD BALANCING

ELASTICITY

VIRTUALIZATION

7

SECURITY

BUSINESS SECURITY

UNHACKABLE

PRIVACY

DATA SECURITY

SYSTEM SECURITY

6

TRACEABILITY

LOGGING

REPORTING

AUDITING

9

QUALITY

STATE OF THE ART

RELIABILITY

8

DRY

DON'T REPEAT YOURSELF

10

EMERGING

ARCHITECTURE

ENABLE MICROSERVICE ARCHITECTURES

BARELY SUFFICIENT DESIGN

11

COMPONENTIZATION

REUTILIZATION

12

COST OPTIMIZATION

COST OF DELAY ANALYSIS

PRODUCTION COST OPTIMIZATION

VALUE DRIVEN

CUSTOMER PERSPECTIVE

COMPANY PERSPECTIVE

13

AUTO FAILURE RECOVERY

FAULT TOLERANCE

REACTIVITY

RESILIENCY

SELF MONITORING

14

PREDICTABILITY

FORESEE FUTURE STATE

DATA DRIVEN



CONTINUOUS MONITORING



DATA DRIVEN

Learn from analytics
Metrics that matter
Heart beat monitoring
Health monitoring

Continuous Monitoring

TAKE THE LEAD AND SHOW HOW IT'S DONE

TOP SECRET





THANK YOU!

@SCRESCENCIO

SCRESCENCIO@LEANIT101.COM