

DevOps The TOYOTA way

Aiming for establish streamlined flow of IT Services in Digital era

Dynamically increase Business Speed applying by TPS thoughts

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My Agility Journey to Digital Era

2008

First Scrum Project : Enhance Accounting Packaged Software for Government

2009

Study TPS (TOYOTA production System)

2nd Scrum Project : Renewal Production Control System for textile manufacturer

Comprehension for success of the Scrum project and advocated TPS-Agile

I learned

The Smaller is the Better

Duration of Sprint
Size of Tasks, Size of Product backlog

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First DevOps project : IT service company for Web-site conversion service to Smart Phone

I learned

**Synchronize Business Speed with
Development cycle of the Scrum Team**

First Enterprise DevOps project

2010 Started the project to Implement Agile development in software Dev.
2011 Successfully implemented Scrum and XP, then Team released bug free program in every week.

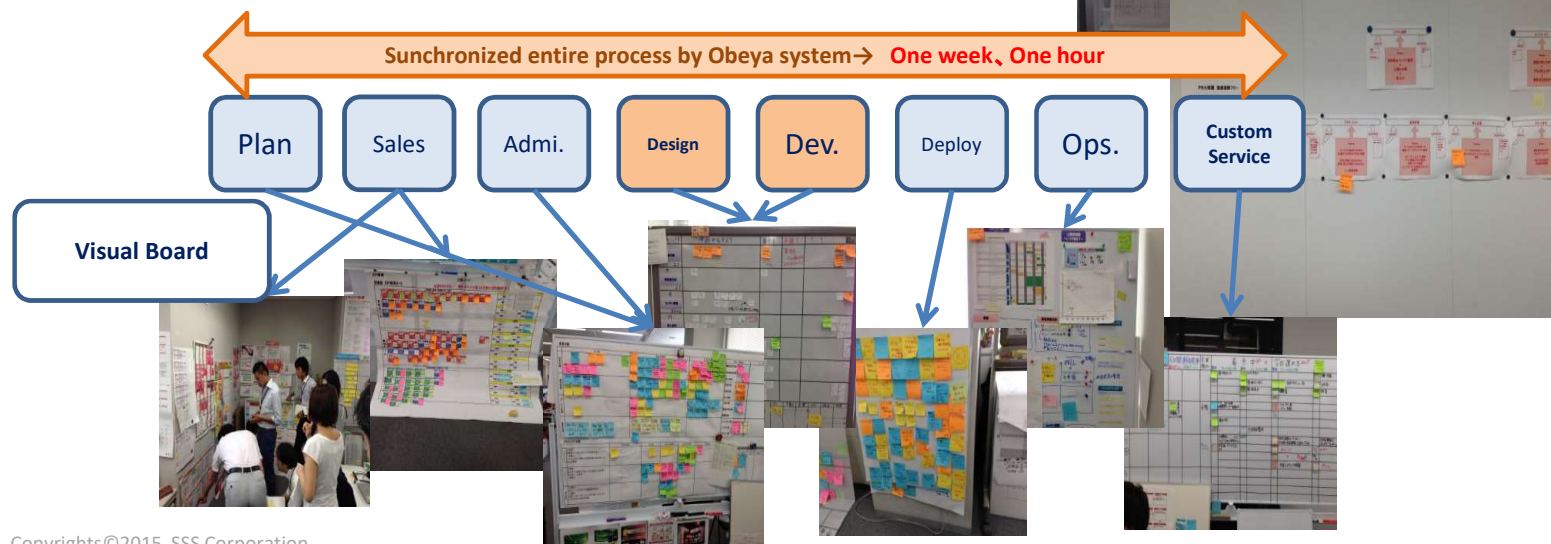
Problem: Even shorter development cycles, but the Business speed couldn't faster as agile development cycle.

2012 Started DevOps project
Implement TPS Kaizen-Jyuku for building whole process and change behavior

2013 Build up Obeya system for DevOps, then successfully completed

Increased Business 3 times in 2 years

Whole process of the DevOps



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2016

Developed EXIN DevOps Master Certification Program

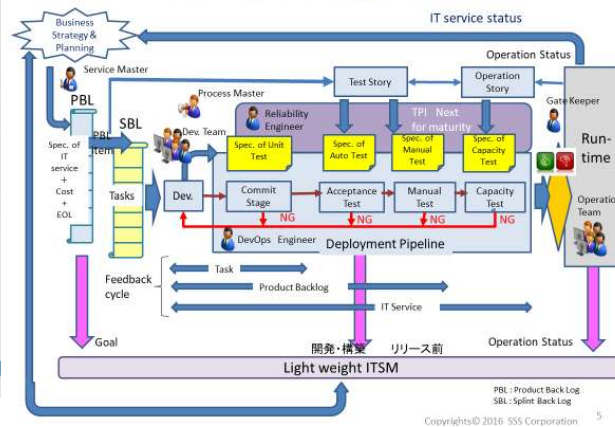
I learned

Transform management from Static to Dynamic

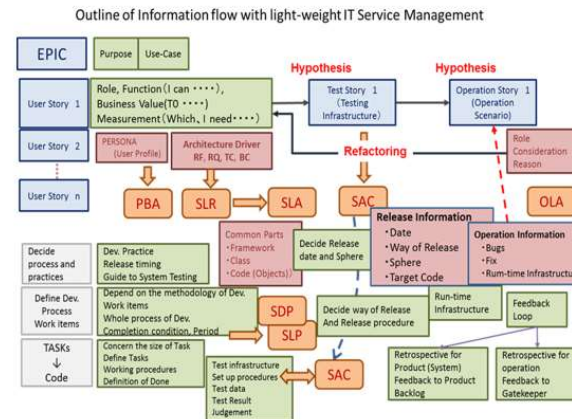
DevOps Master

Success with Enterprise DevOps

Anatomy of DevOps Process



Light weight IT Service Management for DevOps



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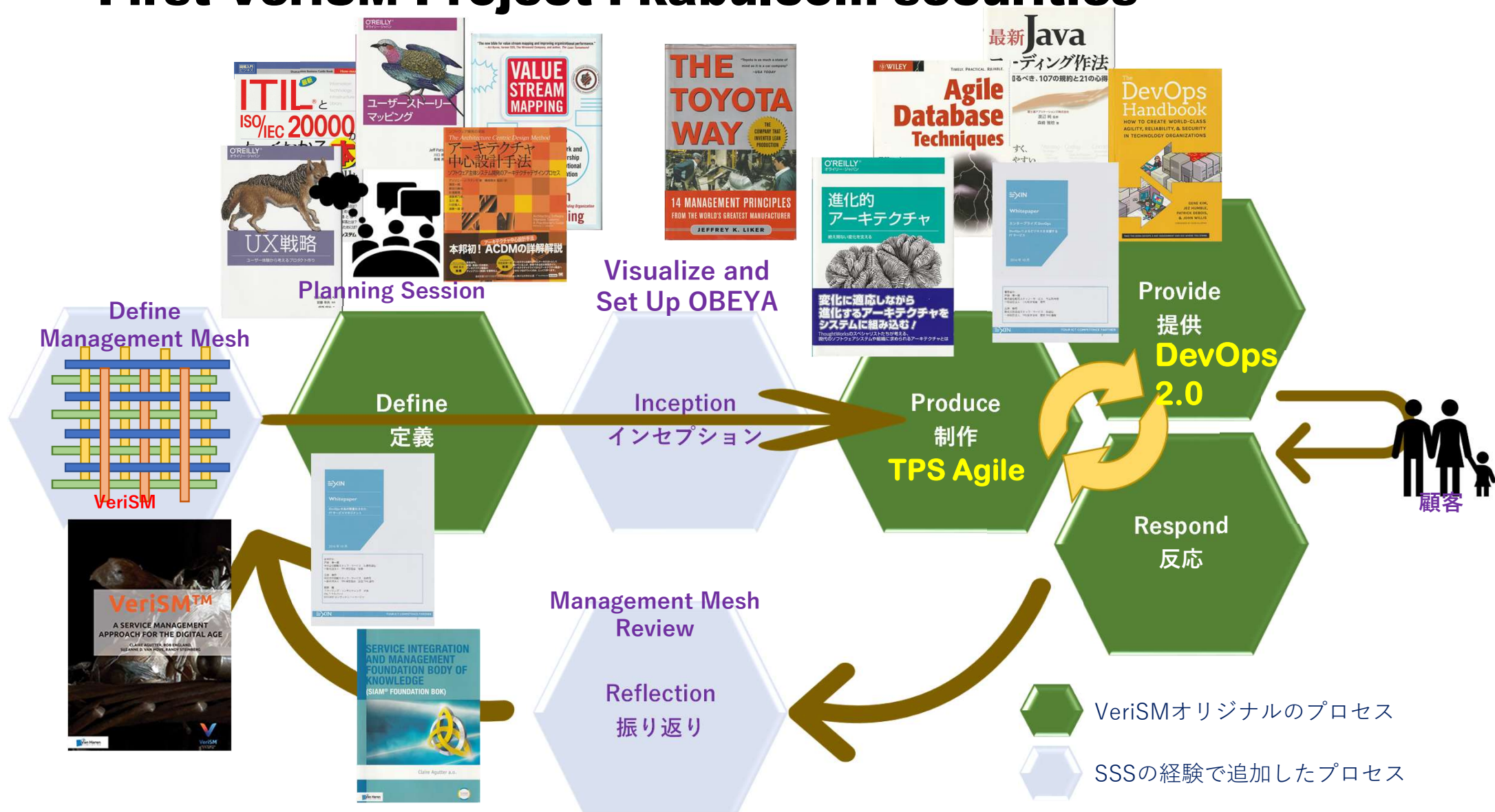
2016

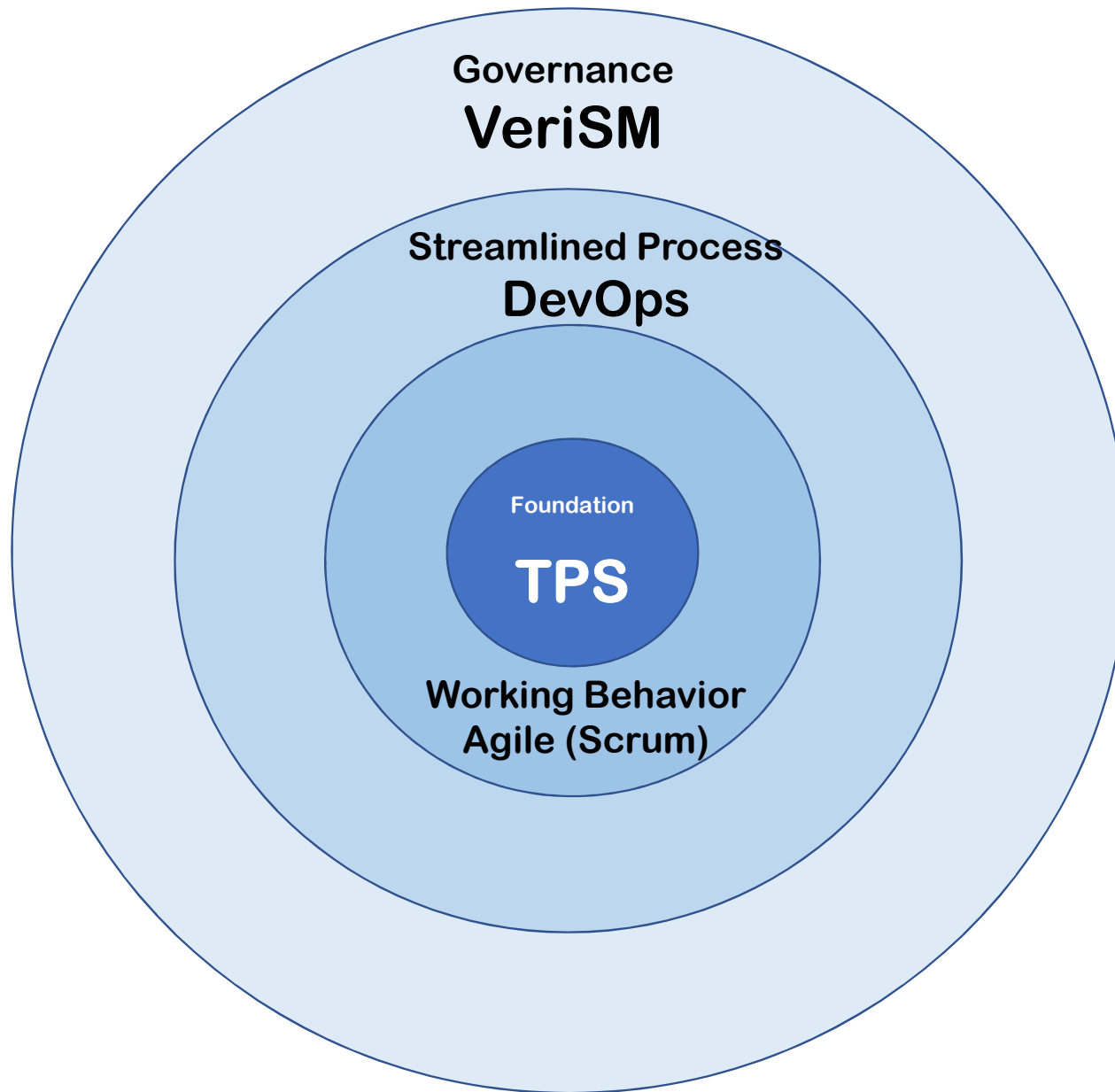
Developed EXIN DevOps Master Certification Program

2018

First VeriSM project : kabu.com securities

First VeriSM Project : kabu.com securities





How to Transform to Digital Era

Focus on Increasing the SPEED

Speed is the key in Digital era

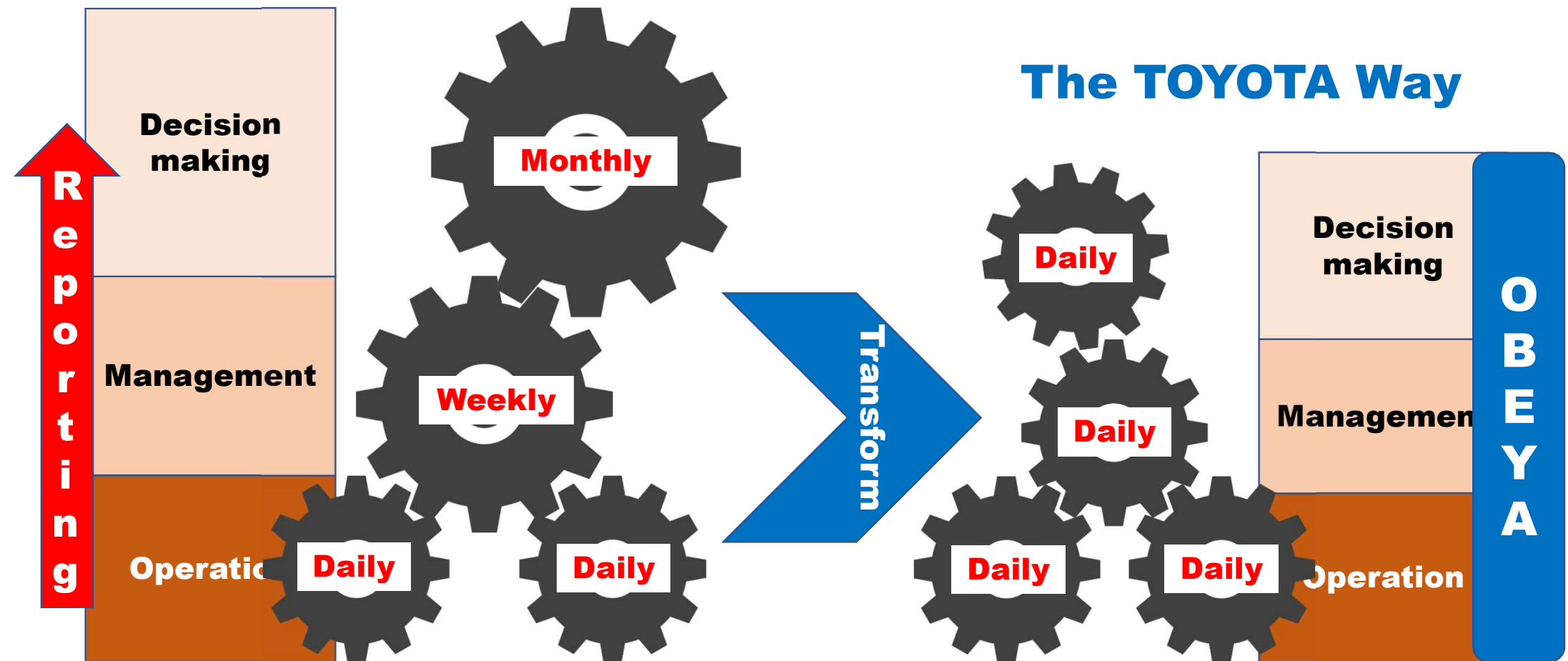


Three Big reasons The speed is business advantage what GAFA thinking

1. There are no chance to hold on. Timely manner is the best.
2. Change customer's requirements so quickly.
3. The Speed is the strongest business strategy. Look at TOYOTA doing

If you would increase the business speed, You have to increase quality of the process first, Because the biggest “Muda” is “Re-Do” in the business process. and eliminate documents/reports for quick decision making.

How to increase your business speed as same as TOYOTA



Mr. Fujiwara, TOYOTA Connect said “The Speed is the Quality”



Bit Coin POC project

Applied TPS and VeriSM

2018 IT Award winning Project
Innovated Organization award



日本証券協会グループ
公益社団法人 企業情報化協会



Award winning SE
100 Super SE registration
Award 2018

au kabu.com Securities Co. LTD



Company Profile

【Company】

Name : kabu.com securities Co., Ltd

Online Stock trading and FX trading company

A group company of Mitsubishi UFJ Financial Group (MUFG)

Founded: Nov. 19 / 1999

Capital : 65.75M\$ (7,196M\)

Employee : 120 person

Revenue (2017) : 217.73M\$ (23,828M\)

Net Profit (2017) : 54.86M\$ (6,006M\)

【Project】

Enter new market where is virtual currency (Crypto-Currency) such as Bit Coin.

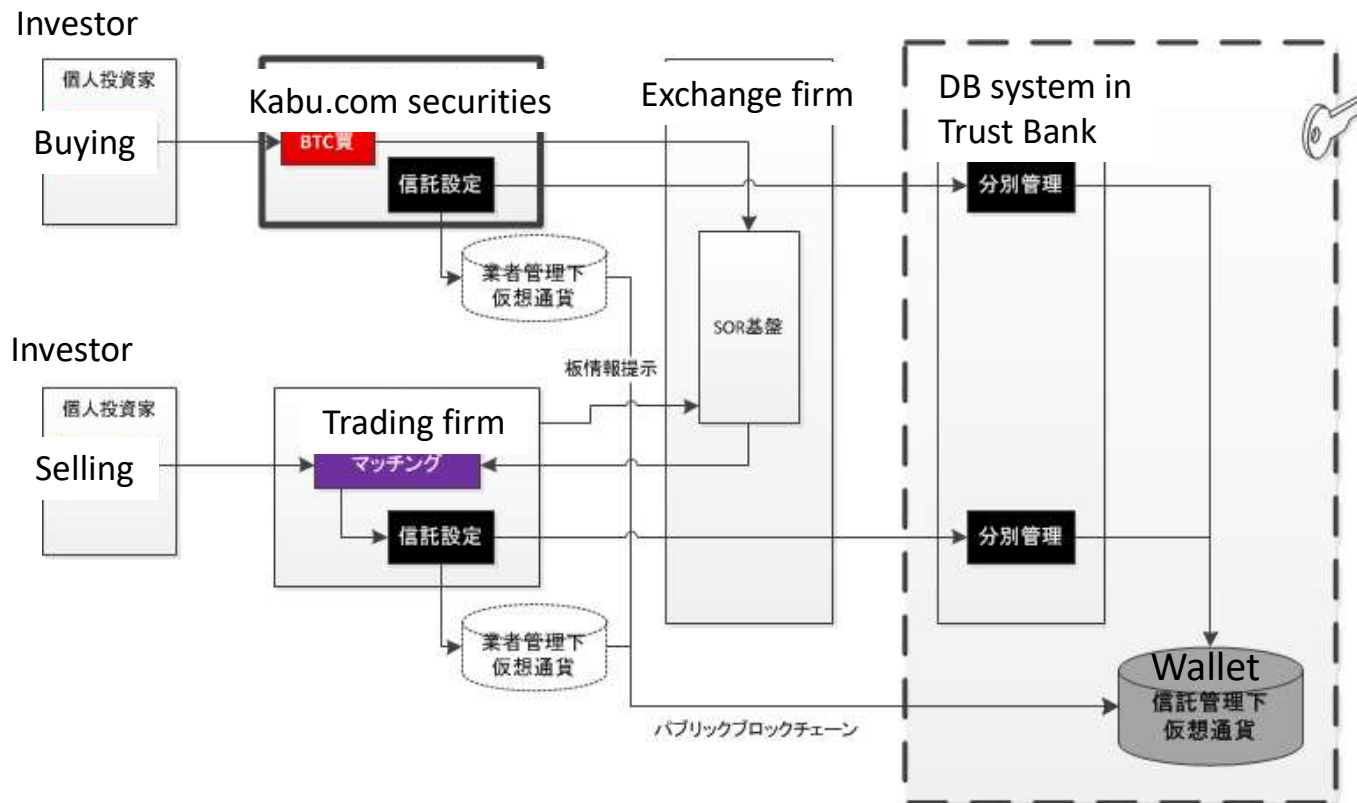
Targeting new customers. Develop new customers layer aged 20 and 30, instead of majority of our existing customers aged 40 to 50,

Develop technical issues for MUFG Coin in future.

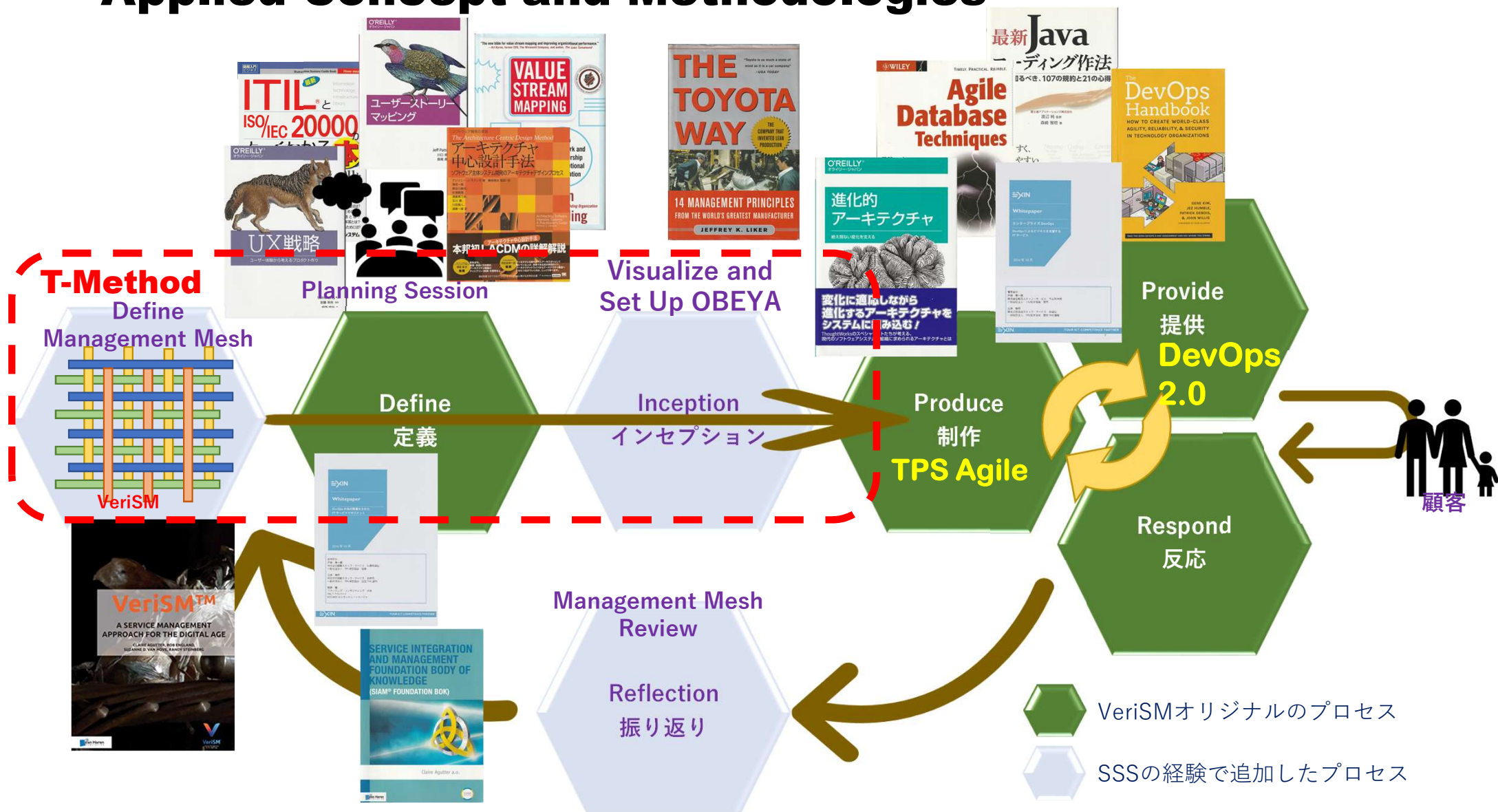
(Mitsubishi UFJ Financial Group had announced the “MUFG Coin (Crypto-Currency)” will implement in the market in this year)

New System Outline

- New services for new business (Bit Coin trading)
 - ✓ Providing value to customers of Crypto-Currency what safety and security, and reliability.
 - ✓ Support trading functionality with safety(Security) and reliable valued information.
 - ✓ Keeping wallet(Account) in secured and reliable legacy Banking DB.

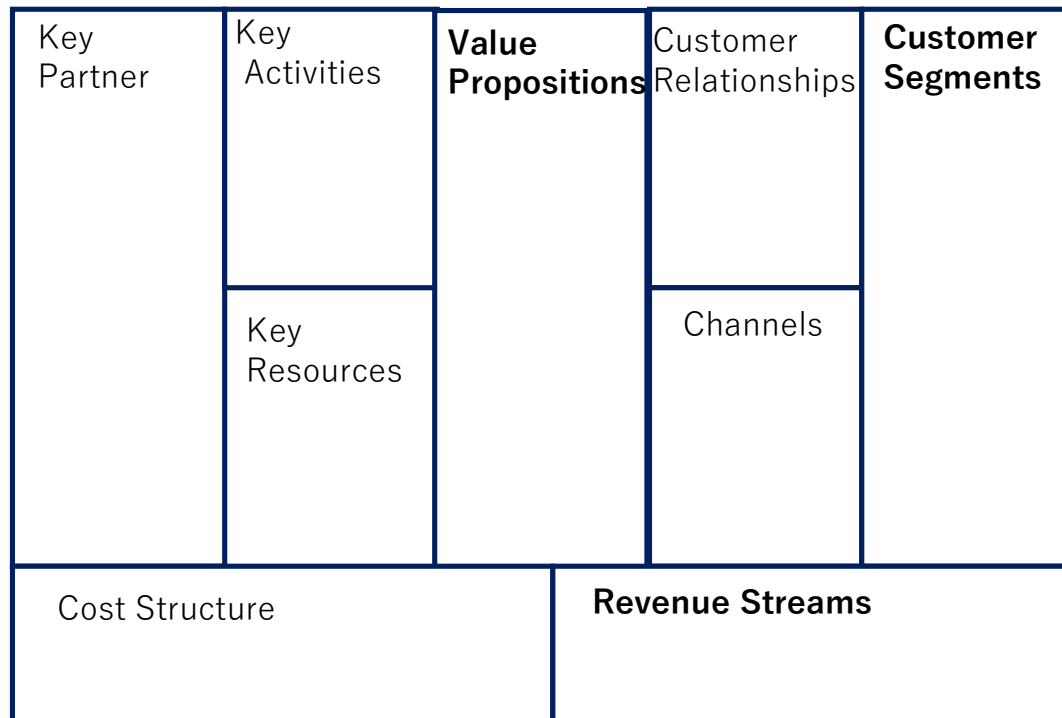


Applied Concept and Methodologies

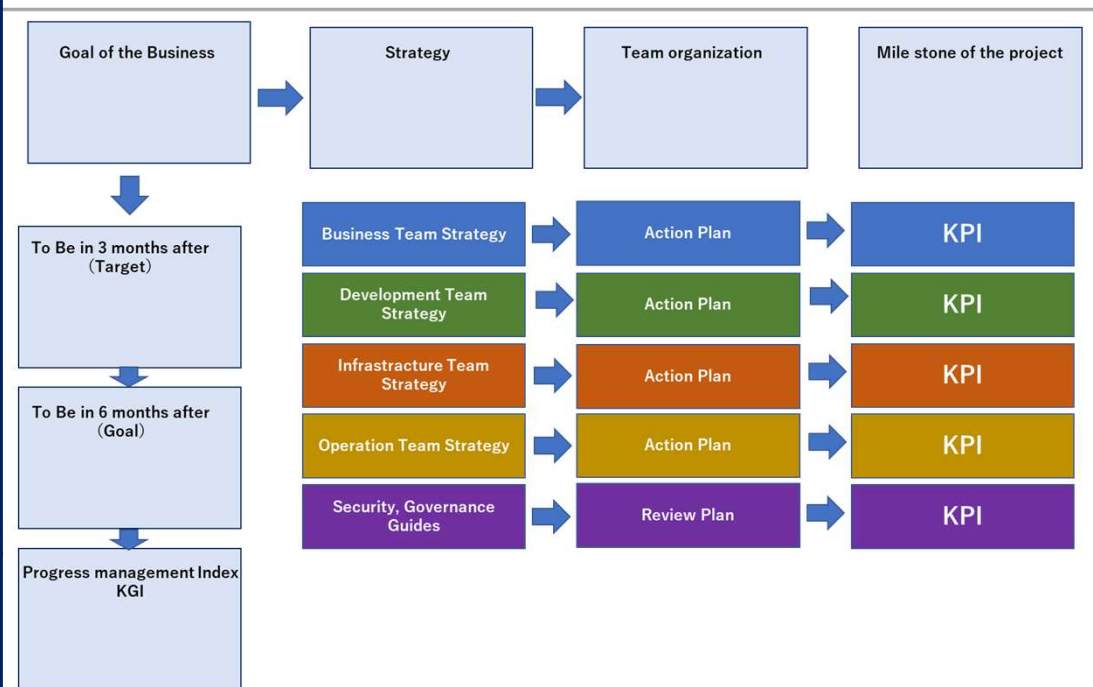


Consistent Management form through Planning to end of the project

計画立案～企画承認～プロジェクト開始～完了までの間に徐々に情報量、情報精度が改善していく為に、常に定期的な見直しを関係者で行う。



Business Model Canvass



Visual Management Board

Sample of UX design (PERSONA and Customer Journey)

ペルソナ設定【ペルソナ③】

ペルソナ③ (男性)

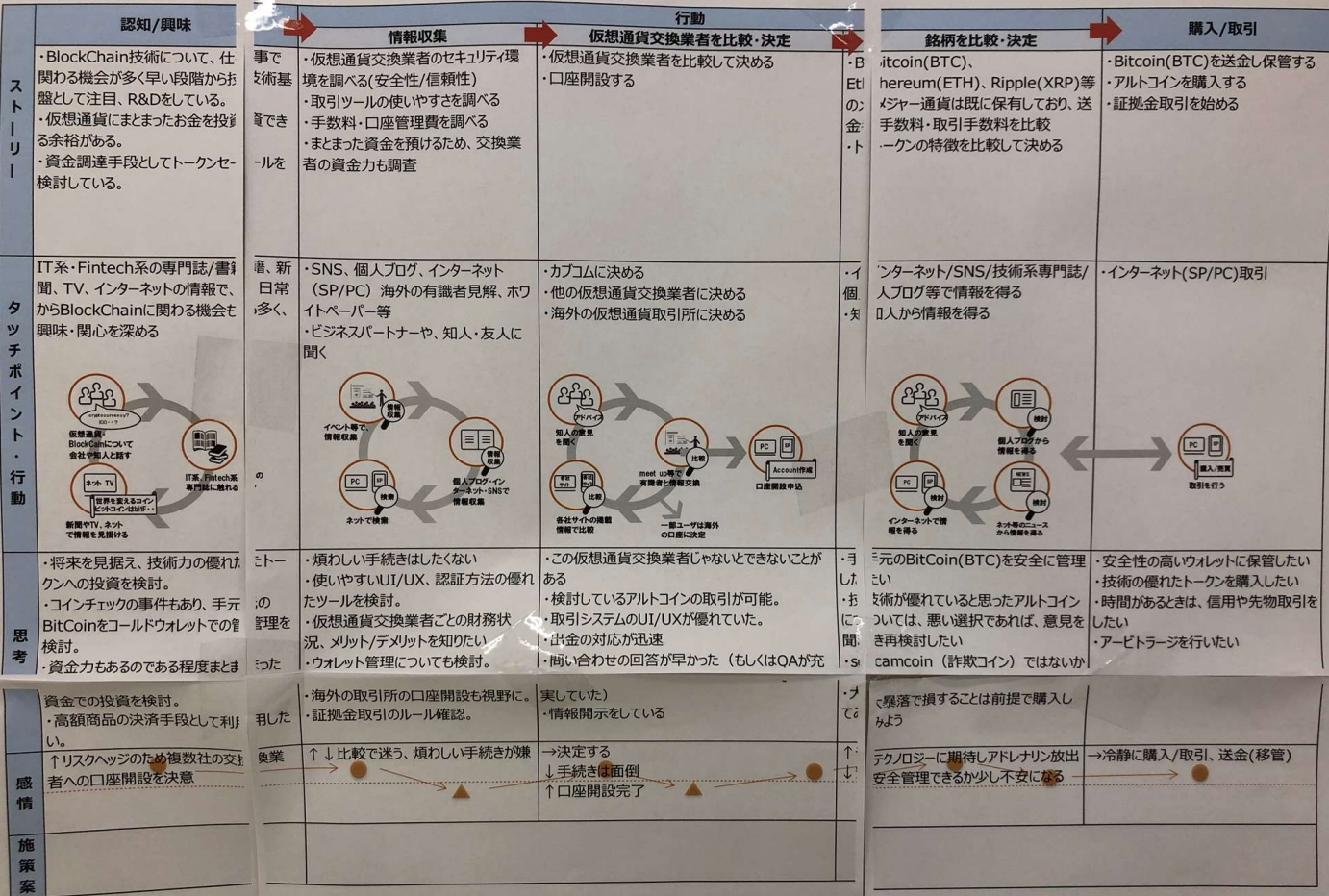
30代後半~40代男性：実業家、サラリーマン (IT系、高所得者)
投資経緯：中・証券口座保有、株式投資信託の取引経験あり。
年収：100万円以上
IT系・高所得者であるBlockchenに注目



詳細		一般データ	
年齢	ユーザーは何歳なのか	30代後半~40代	38歳
性別	性別は男性なのか女性なのか	男性	男性
住まい	都会なのか、田舎なのか都道府県は	東京 (大都市)	東京都
稼ぎ	月、年間どれくらい稼いでいるか	500~1000万	700万/年
貯蓄	貯蓄や貯金はいくらあるか	1000~3000万	1000万 (貯金)
職業	どんな職業で働いている人か	IT系経営者、役員	IT系経営者、役員
肩書き	役職や肩書き	役員	役員
主な収入源		給料、事業収入	給料、事業収入
資金		安定した収入がある	安定した収入がある
生活	どのような生活スタイルか	平日、日中は仕事	平日、日中は仕事
	夜は遅いのか早いのか	遅い	遅い
	休日は何曜日か	土日祝	土日祝
趣味	どのような趣味を持っているのか	読書、ミニ四駆、ワイン等	読書、ミニ四駆、ワイン等
	どのようなことに時間を割いているのか	読書、ミニ四駆、ワイン等	読書、ミニ四駆、ワイン等
家族	親と暮らしているか、結婚しているか	既婚、核家族	既婚、核家族
認知	知ったきっかけ	前から興味	前から興味
メディア	どのようなメディアチャネルを利用しているか	テレビ、新聞、インターネット、SNS	テレビ、新聞、インターネット、SNS

行動	衝動買いするタイプかじっくり検討して購入するタイプか	無駄なものはない	無駄なものはない
行動	電車を利用するか、車を利用するか	電車、タクシー	電車、タクシー
価値観	お金への価値観はどのようなものか	堅実	堅実
投資方針	浪費家、節約家、投資家	節約家だが、株式投資経験あり	節約家だが、株式投資経験あり
PC	パソコンは保有しているか	2台保有、リテ	2台保有、リテ
スマホ	スマホは保有しているか	1台保有	1台保有
環境	インターネット環境があるか	家では光回線、別途、タブレット	家では光回線、別途、タブレット
SNS	Facebook、Twitter、Instagramなどを利用しているか	Facebook、Twitter、Instagram	Facebook、Twitter、Instagram
購買	ネットを通じて購買を行うか	Amazon、楽天	Amazon、楽天
その他特徴			

カスタマージャーニー設計【ペルソナ③】



What we did in three months

April 2018

Project kick-off at April 1st
New Business model generation
Define Business model for new Business (Bit-Coin)
Approved the amount of project budget
Review and Define Governance
Review and Define Principle for service management
Create a plan of Planning session
Preparation for the Planning session
Gathering data.
Arranging documents

May 2018

Hold Planning Session on May 11,12
Share Business Environment, Strategy, and Business model in the Team
Define PERSONA
Sort out User's requirements
Define each items what the 4 domains of Management mesh in VeriSM
Review Value Stream Map of the target process
Confirm 4 Architecture Drives in ACDM
Finalize Body Process of the system
Confirm the condition for End of Life (EOL)
Break down major Tasks for each team
Start agile development with 2 weeks sprint

June 2018

Continue agile development with 2weeks sprint
Sprint review by Product Onwer
Prepare deployment for first release at beginning of July

Development period:
3 Sprints with
2 weeks/sprint
(6 weeks)

July 2018

First release of the system

Discussion Items in the session

Sharing common Goal

Understand Business environment and Business strategy

Understand customers and users (PELSONA)

Create System image for the IT services

Architecture related discussion

- | | |
|--------------|---------------------------------|
| Discussion-1 | Business Restriction |
| Discussion-2 | Main functions and Body process |
| Discussion-3 | Technology Restriction |
| Discussion-4 | Quality Issue |

ITSM related discussion

- | | |
|--------------|--|
| Discussion-5 | Infrastructure Issue |
| Discussion-6 | Operational Issue |
| Discussion-7 | Business advantage |
| Discussion-8 | EOL condition and Service Level definition |

VeriSM related discussion

- | | |
|---------------|--|
| Discussion-9 | Review and Define Management Mesh |
| Discussion-10 | Review Value stream map and user Stories |

Management Mesh (Defined)

【Business Environment】

Uncertain Business environment
Many players joining the market
Business Rule(BCG) of MUFG
Legal restraints (will enforce new law in future)

【Emerging Technologies】

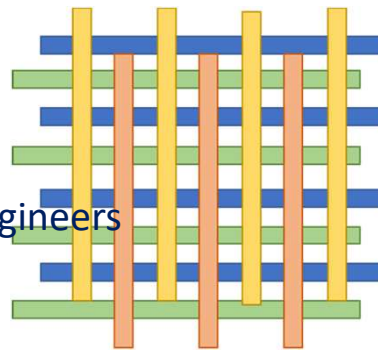
JAVA and AI refactoring
Container (Docker), Kubernetes
Cloud Infrastructure (AWS)
Blockchain
API to connect Secured legacy Banking DB system

【Resources for 1st Step】

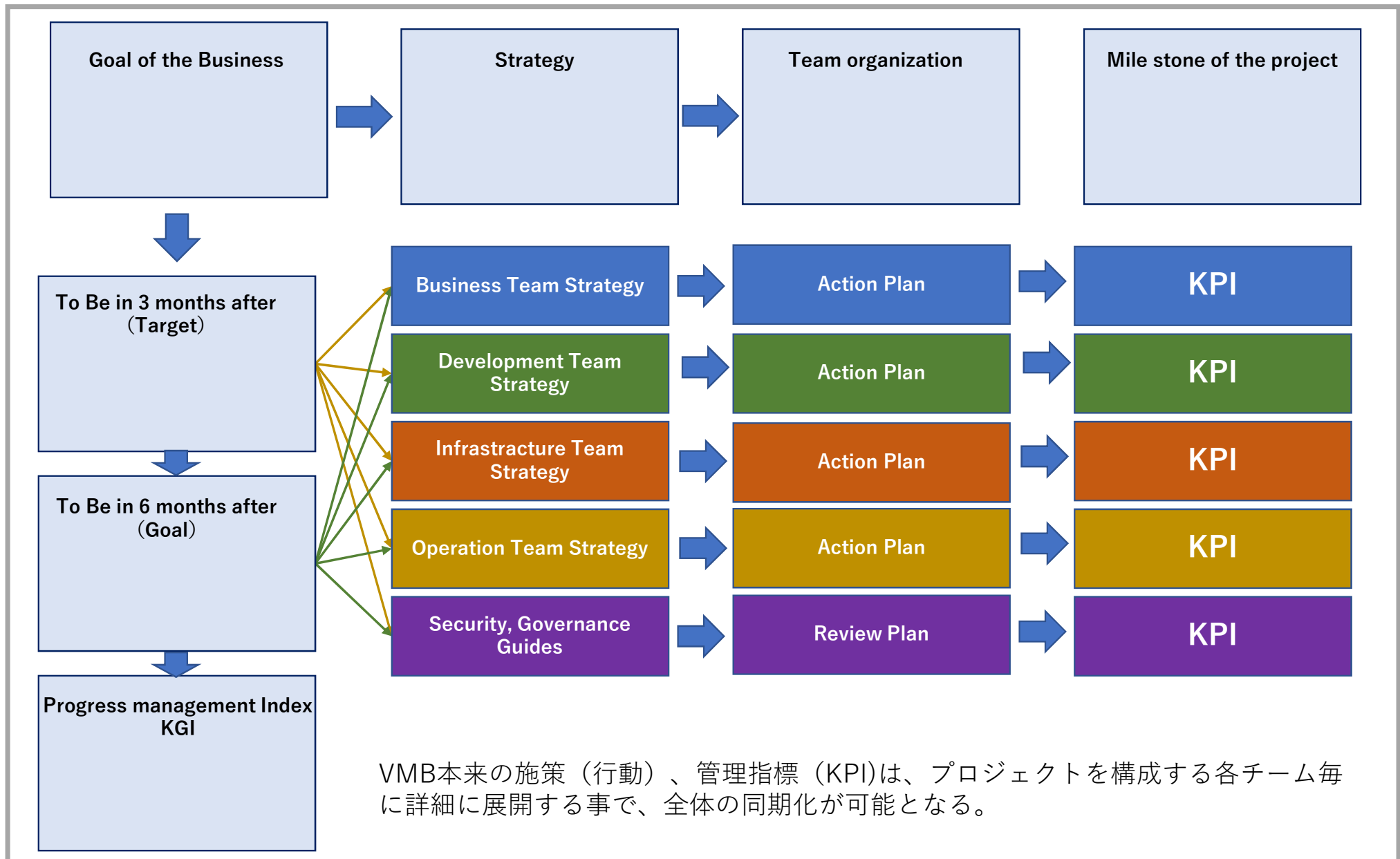
Total Budget: 200K\$
Development(Scrum) team: 4 engineers
Service master (Product Owner)
Supporting staff for PO
Process master (Scrum Master)
DevOps Engineer
Reliability Engineer
Outside supporting Team
EOL: Up to 3 years
Period: 8 weeks (Release on July 1st)

【Management Practices】

TMS (TOYOTA way Management System)
ISO20000
SIAM
DevOps 2.1 and Scrum



Security
Development
Technology adviser (System)
Operation
Infrastructure



At Inception Phase

Set up OBEYA

OBEYA

Share Goal image & objectives, Synchronize between Team

VMB

Business Team

Backlog List

Business Actions Backlogs

分解

Task Board

To Do Doing Done

Retrospective Board

Keep Problem Try

Development team

IT Service Backlogs

分解

To Do Doing Done

Keep Problem Try

Infrastructure Team

Infra related Action Backlogs

分解

To Do Doing Done

Keep Problem Try

Operation Team

Operation schedule & Required Action Backlogs

分解

To Do Doing Done

Keep Problem Try

Security & Governance

Security & Other mgmt Review

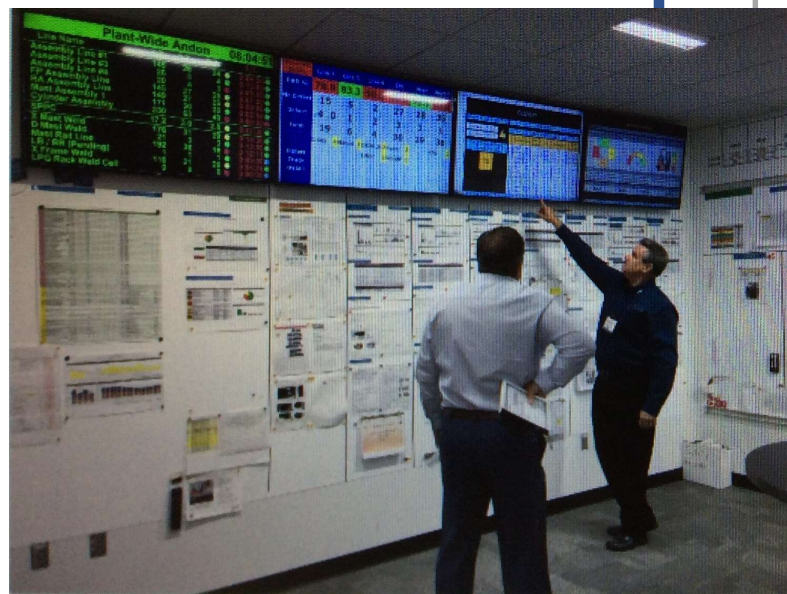
分解

To Do Doing Done

Keep Problem Try

➤ Combine Digital and Analog

➤ Reduce Meeting & Reporting, Quick decision making



What is OBEYA

Updating and Keeping all of related information at one place.

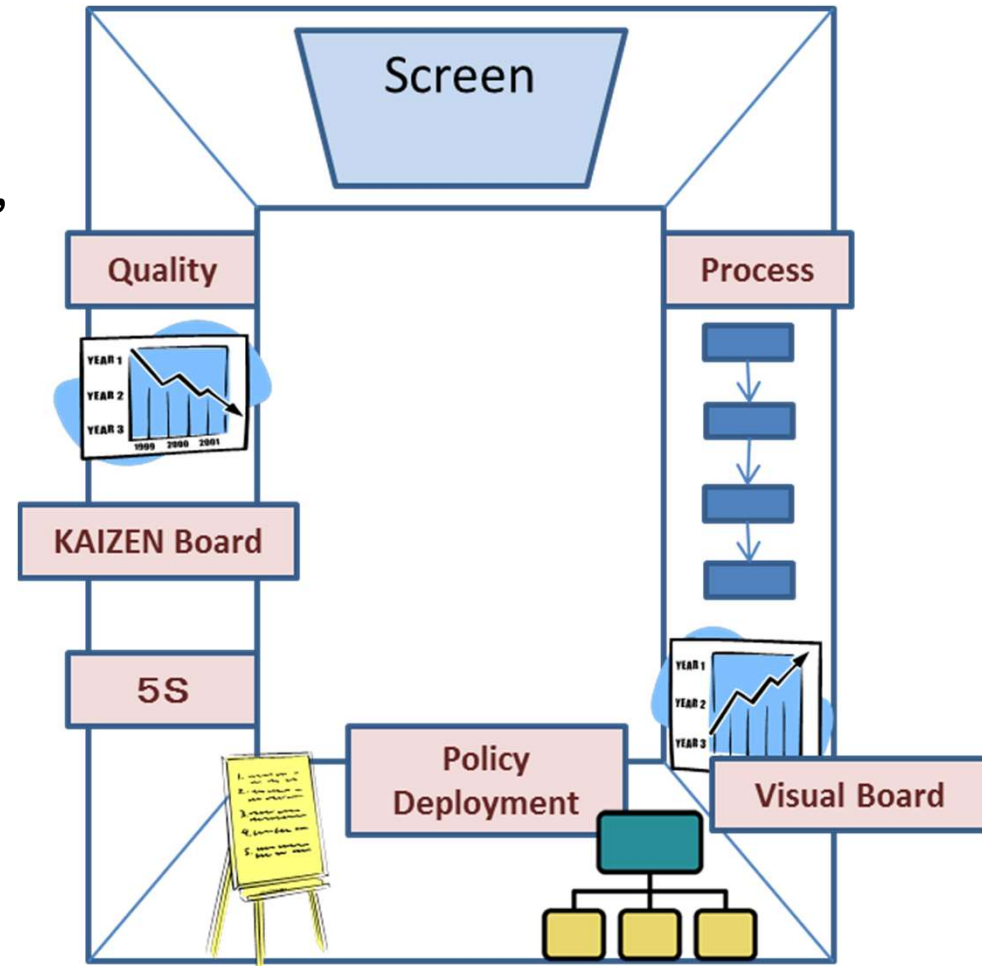
So you can see every activities in the project what's going on now, such as progress, problems, and issues.

This is the decision making place.

When the cross-functional team works together, OBEYA system enables fast and accurate decision-making, improves communication, maintains alignment, speeds information gathering, and creates an important sense of team integration.

OBEYA is war room which serves two purposes - information management and on-the-spot decision making.

There are many visual management tools in it. So team members can quickly see where they are in every aspect of the program.



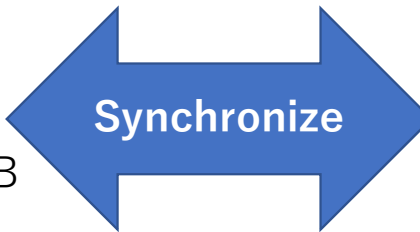
Management OBEYA

Set up in the office of COO or LOB

Who is the owner? COO or LOB

- Vision
- Principle, Business Conduct Guideline
- Policy deployment
- Business Plan
- Products, Service portfolio
- Value stream Map
- Management board for Service level
(Use VMB format)
- Retrospective board (KPT)

OBEYA supports quick decision making by Genchi Genbutsu



Operational OBEYA




Set up in the office of DevOps Team

Who is the owner? Service master of DevOps Team

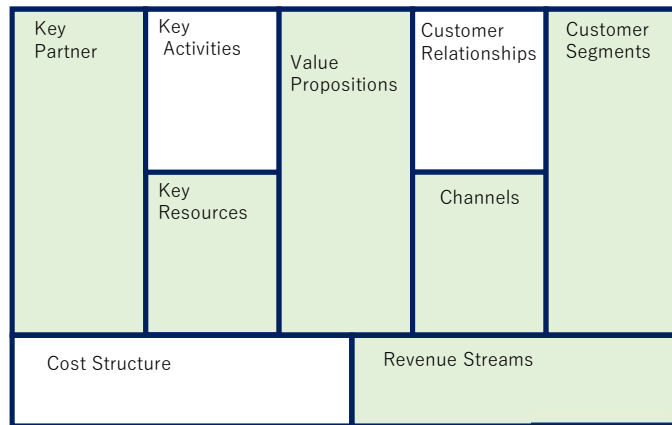
- Vision
- Principle, Business Conduct Guideline
- Policy deployment
- Rule of the Team
- Value Stream Map
- Management board for Service level
(Use VMB format)
- Maturity Management board for the Team (Use VMB format)
- Quality management board
(Use VMB format)
- Task boards
- Retrospective board (KPT)
- Management board for Cooperation and Synchronize between teams
- Related Information Radiators

Transform Project Management

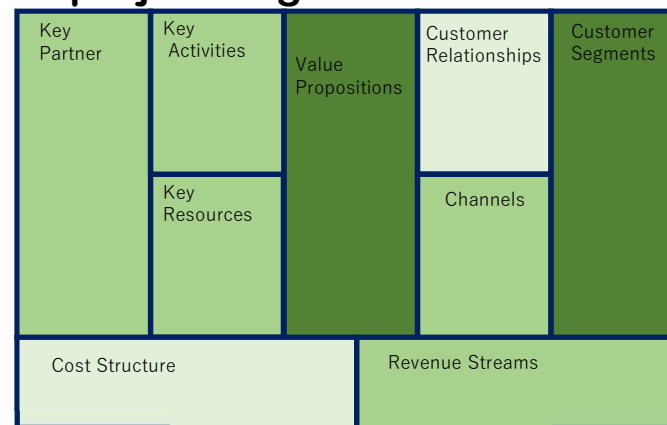
Basically IT service development project should be within 24 weeks.
In the case of Huge development project, separate project project plan with 24 weeks, and get review and authorize next 24 weeks period.

-  Guess : On an impulse, cannot have Data.
-  Hypothesis : Some of the things can explain by Data
-  Facts : Most of all things can explain by Data

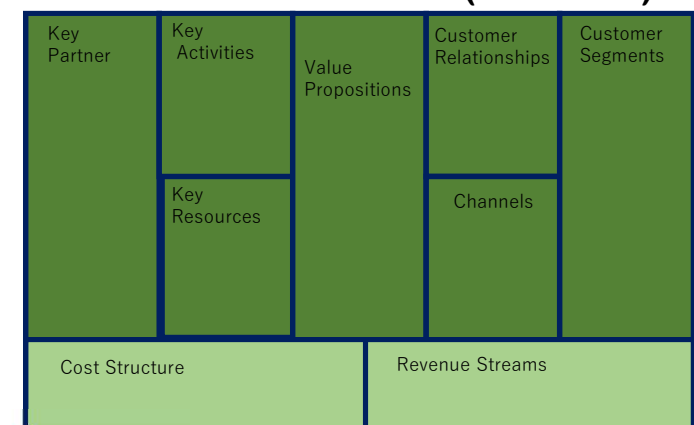
At Approve the idea



At project begin



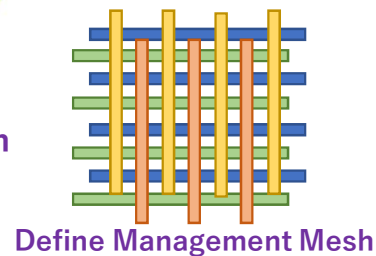
At into the Service In (Release)



Everybody can propose the idea of new services when the idea come to.
(15 minutes presentation)



4 weeks



24 weeks



Key fundamentals of DevOps The TOYOTA Way

Inspection

Inspect your work did right by yourself

Prepare the Gauge for your work (Definition of Done)

These are all
Human Factors
for Agility

Transparency

Visualize all of your works is basics. Visualize means easy to recognize Abnormal status

Visualize assure Accountability

Defining Small tasks are puffed up Transparency and Speed

Motivation

Motivation of your people is basic factor of your business achievement

Service quality depends on employee's motivation

$$\text{Performance} = \sum_{i=1}^n (\text{Personality})_i \times (\text{Ability})_i \times (\text{Motivation})_i$$

Self-organized Team

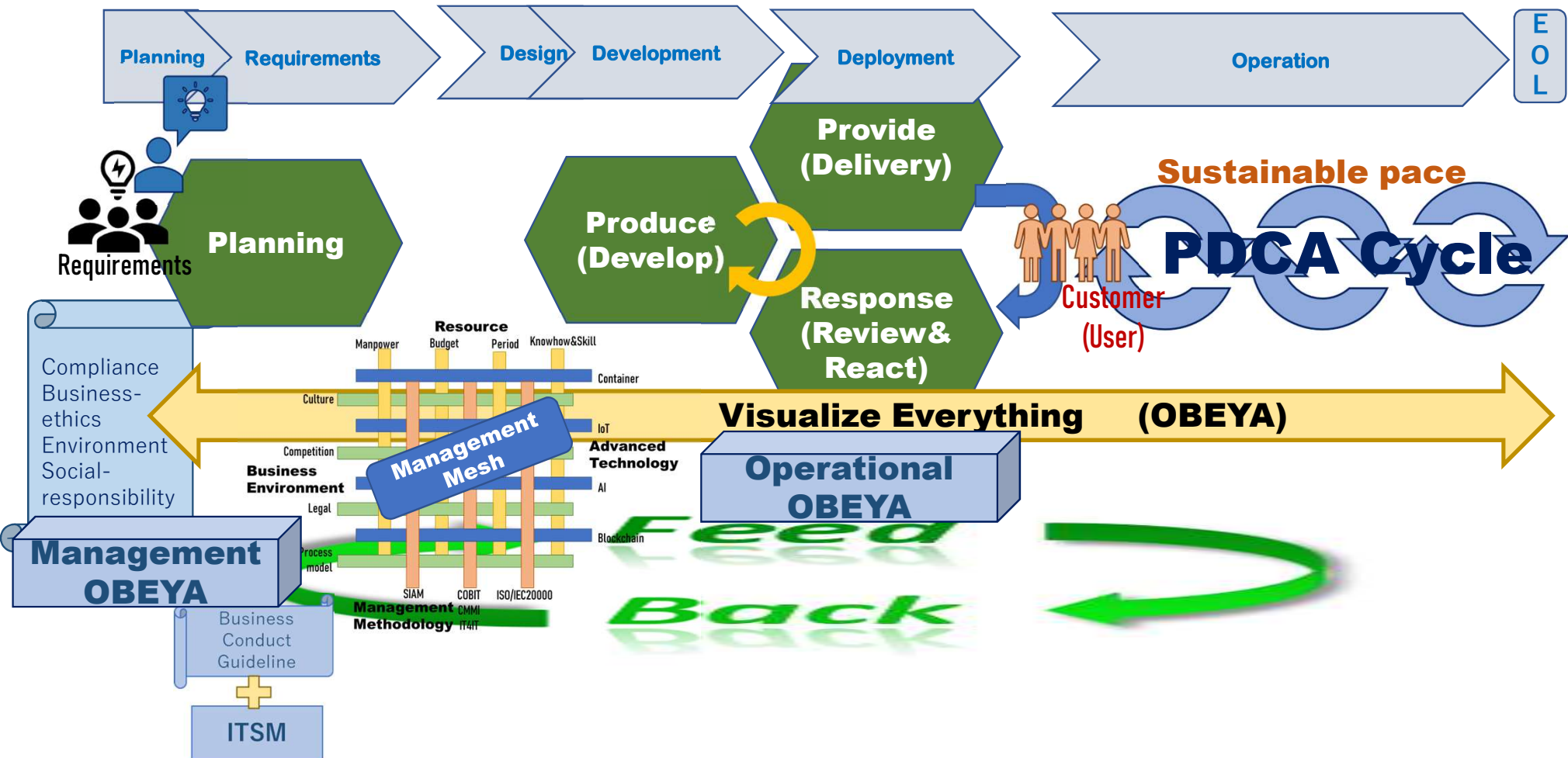
Only Team can provide high speed operation.

Flow

Keeping Faster Streamlined Process flow (manager's role)

Utilize "Baton passing zone"

New DevOps process flow applying TPS & VeriSM



Get in touch:  Lktoda@ask3s.net

 Koichiro Toda



спасибо 谢谢
GRACIAS 谢谢
THANK YOU
ありがとうございました MERCI
DANKE धन्यवाद
شُكراً **OBRIGADO**