Software Engineering Assignment - 1
UE19CS302

Team Members

- ❖ A Sai Chaithanya   PES1UG19CS002
- ❖ Abhiram Puranik   PES1UG19CS018
- ❖ Abhishek Aditya BS   PES1UG19CS019
- ❖ Adithya M S   PES1UG19CS027
- ❖ Aditya Ramesh   PES1UG19CS033

Introduction

- ❖ **Service Inc.** is a software services company focused on: Web-based IT applications, manufacturing, E-Commerce, banking, Information Security etc.
- ❖ Service Inc were a **Top-Down** model based hierarchical company.
- ❖ Sets an ambitious goal to increase **revenue by 25%** and **margin by 40%** in the next 3 years.
- ❖ **Product Inc,** a key client of Service Inc, is culturally different from Service Inc. who have a flat hierarchical organization.
- ❖ **Target** could be **achieved** if Product Inc would **handover execution part of** product line roadmap for growing products on revenue sharing basis.
- ❖ Adopted **SCRUM methodologies.**
- ❖ Product Inc. Sr. Program Director, **Stan**, assessed Service Inc.
- ❖ Conducted **anonymous surveys** and attended meetings.

Introduction (Continued)

❖ Presented his findings at the end of 8th week.

❖ Stan's findings include:

1. Daily meetings of **60-90 minutes**.
2. Quality engineers joined after **2 weeks** and test engineers tested in **4th week** in a 4 week sprint.
3. **Project manager** has been trained into the new role of **Scrum Master**.
4. Team members are also responsible for **emergency product issues**.
5. **Task list** was only a **draft** which had to go through a process to be finalised.
6. Regular **Sprint review meetings**.
7. Over **Ambitious Backlog**.
8. Product Owners had **never met customer**.

❖ Finally, gave **"NO GO"** recommendation.

Why Did they not meet the intent of the Agile Manifesto?

1. Extensive / Large Volumes of **Documentation**.
2. **Bottom-Up Agile Transformation** - Hierarchical and Bureaucratic Management.
3. Operates on building **airtight requirement.**
4. Shields core team from **resource issues, customer complaints and the sustenance headaches.**
5. Limited collaboration with customers and users.
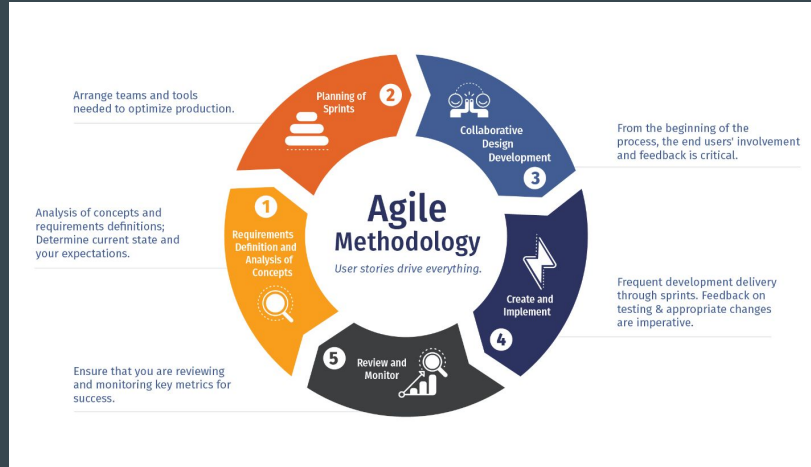
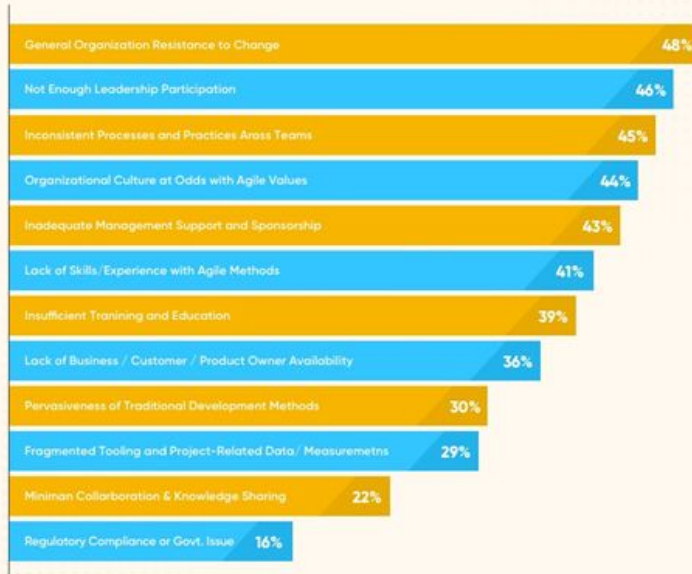*Adaptable*

Quality - Driven

Cooperative

Rapid

Iterative

Where do Organisations go **Wrong**?

Challenges Experienced When Adopting & Scaling Agile

| Challenge	%
General Organization Resistance to Change	48%
Not Enough Leadership Participation	46%
Inconsistent Processes and Practices Aross Teams	45%
Organizational Culture at Odds with Agile Values	44%
Inadequate Management Support and Sponsorship	43%
Lack of Skills/Experience with Agile Methods	41%
Insufficient Traning and Education	39%
Lack of Business / Customer / Product Owner Availability	36%
Pervasiveness of Traditional Development Methods	30%
Fragmented Tooling and Project-Related Data/ Measuremetns	29%
Miniman Collarboration & Knowledge Sharing	22%
Regulatory Compliance or Govt. Issue	16%

Source: State of Agile

6.   Task List Approval.

7.   Detailed plan for the Agile Transformation.

8.   Long Daily stand-up meeting..

9.   Employees had no freedom.

10.   Stick on to Legacy/Conventional project development roadmaps.

11.   Political.

Where did they deviate from expected SCRUM implementation ?

1 . The **daily stand-up meeting** extended to 60-90 minutes.

2. The **team** was also responsible for emergency product issues that **would tend to majorly upset the sprint deliverables.**

3 . The **sprint backlog** underwent **changes till 3rd week** in 4 **week sprint.**

4 . Project manager trained into new role of **scrum master is making commitment on behalf of the team.**

5 . Quality engineers joined after 2nd week and test engineers wrote test cases and tested in 4th week, so **if something goes wrong** either development or testing team **can become a bottleneck and affect in delivering the sprint goal.**
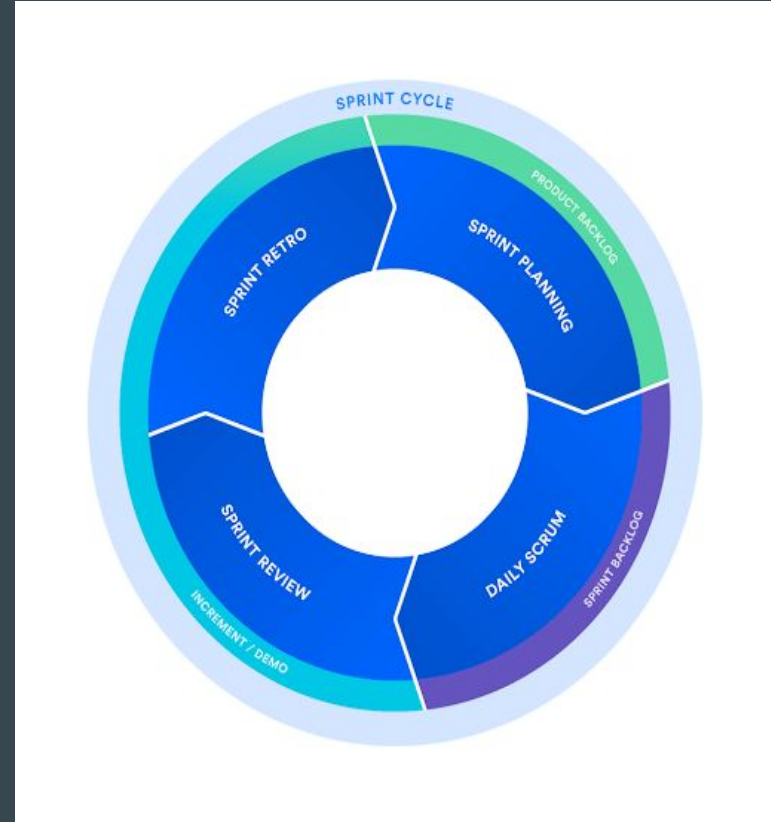
6 . **Backlog was more ambitious** than the average velocity of scrum team and the team was encouraged to take more ambitious targets.

7 . The **scrum master** is deciding and **assigning tasks** among team members.

8 . The **product owners** have **never met** a customer.

9 . The product owner discussed the task list with centre manager and scrum master and team following which the backlog was finalized by the end of 1st week.

10 .The **sprint review meeting** included a presentation and **feedback was only collected from the members instead of stakeholders and other customers.**

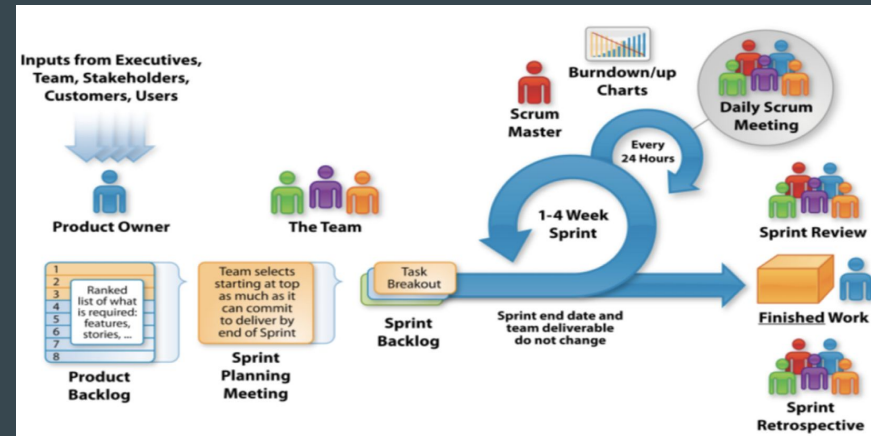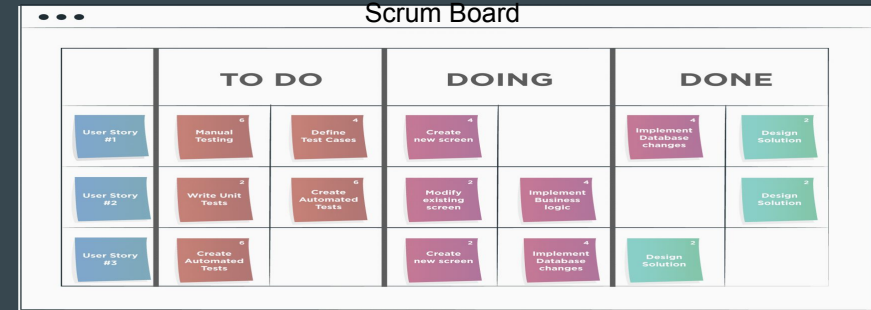11 . There was **no Sprint Retrospective meeting** done at the end of the sprint.

Scrum Team   Scrum Master   Product Owner

Scrum Board

How each of the finding contributed to the go/no-go Recommendation

| No.	Contribution	Reasons
Finding 1	**Positively**	Daily Scrum meeting and Sprint Review meeting with equal participation from scrum team members.
Finding 2	**Positively**	Quality engineers joined halfway of sprint, rotated among projects. Efficient. Test engineers tested after the 3rd week.
Finding 3	**Positively**	Product managers committed to role of scrum master.
Finding 4	**Negatively**	Requirements for 4-week sprint inconclusive. Hence, User Stories not prioritised.

Finding 5	Negatively	Product Owner didn't discuss about the customer reviews on the product in sprint review meeting.
Finding 6	Negatively	Task list (only draft) finalized at end of 1st week of sprint based on discussions with centre manager and not customers.
Finding 7	Positively	Aggressive and Ambitious in deciding product backlog.Hence,can come up with efficient and optimistic roadmap.
Finding 8	Negatively	Product manager never met the customer. Customer insights not taken into account. No response for change.

Cultural Differences Between Product Inc and Service Inc

FEATURE	PRODUCT INC	SERVICE INC
Organisational Structure	Flat	Hierarchical
Workplace	Open office with cubicles of the same size	Room and desk allocated based on seniority
Documentation	Minimal	Large volumes
Bureaucracy	Limited	Prevalent
Communication	Direct one to one conversations	Restricted to meetings in office cabins

How can Service Inc achieve **40% margin** growth while achieving only a **25% revenue** growth?

- **Ambitious expectation** as their current growth of **10%(Y-O-Y) in margin** and **12%(Y-O-Y) in revenue** with continuous **drop in margin.**
- Mathematical example: Considering **25%** growth in revenue
  Initial: $100 revenue, $60 cost, $40 profits.
  Later: $125 revenue, $55 cost, $70 profits
- Business in the **Engineering sector with high demand,** like Growth products is a key to achieve **growth in revenue.**
- **Cost cutting** is the necessary step for increasing growth in margin.
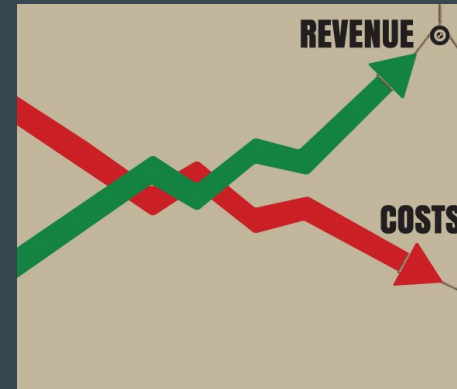
Cost Cutting measure involving many planned approach for a 3-year term

- **Investments**
- **Layoffs**
- **Hiring**
- **Cultural change**
- **Labour Arbitrage**
- **Training higher authorities**
- **Faster paced scrum sprints**
- **Having centralised engineering centers**
- **Performance review**
- **Automation**

Thank You