### Clinical Trials Company Minimal Viable Scaling with Scrum





### Context

Company P is a global healthcare intelligence partner that develops life-saving and life-improving drugs with comprehensive clinical development services, including data management, statistical analysis, clinical trial management, medical writing, and regulatory and drug development consulting.





## Context cont.

modules acquired by a 3<sup>rd</sup> party, new features and the incorporation of Salesforce's Lightning UI.

The initial Version 3.0 Road map consisted of 5 phases (releases) over an 18-month period.

quality. For example:

- The average lead time (from requirements defined to code in production) took approximately 12 months.
- Approximately half of the 15 modules were deemed unstable by QA once testing started. This caused a 6-week delay in meeting the Phase 2 deadline.

accelerate delivery and quality.

- Version 3.0 of their clinical trial management platform was a significant upgrade that involved stabilization of several
- The first two phases followed a traditional waterfall approach resulting in long lead times, missed deadlines and poor

This case study reflects the training and coaching that occurred during Phase 3 when Scrum was introduced to





# Challenges

market by the defined target date. Key Challenges included:

- Accelerating the delivery & quality of the remaining 3 phases due to missed phase 1 & 2 deadlines
- Improving Release Planning to balance scope with organizational capacity
- Improving team level Backlog prioritization & Story Refinement
- Establishing a foundational understanding of Agile Values & Principles and the Scrum Framework
- Maturing the Scrum Master and Product Owner roles
- Improving planning, collaborating and coordinating work across 5 globally distributed teams

Company P was challenged to fully implement the 3.0 version of its clinical trial management platform to





# Challenges cont.

- Company P acquired a solution that was not 'fully baked' or tested.
- taken to identify those features and remove them.
- Not all teams are Agile, such as Reporting, and this creates dependency challenges.
- to save time for the initial release and to simplify upgrades.



Teams are split geographically across the US, Ukraine (Core Value Team), Netherlands, Chennai and Hyderabad. This challenge has been addressed by restructuring teams based on geography.

There are extraneous features in the acquired solution that are not needed. However, time needs to be

The goal is to get automation to a point where they are at most 1 Sprint behind the team.

Minimize the amount of Sales Force customization that occurs when developing the new solution in order





### **Globally Distributed Teams**





# Approach

- Revisit the vision for the 3.0 product to create alignment
- Work with leadership to prioritize and refine the Epic level backlog and create a road map forecast consisting of a Minimal Viable Product (MVP) for Phase 3 and subsequent Minimal Viable Increments (MVIs) for Phases 4 and 5 to realize the product vision
- Work with leadership to define a minimal viable scaling model to align and coordinate work across 5 globally distributed Scrum Teams





## Approach cont.

- Level set the teams on Agile & Scrum fundamentals through facilitated training and targeted workshops
- Improve role clarity and maturity for the Scrum Masters, Product Owners and Product Manager
- Establish a Release Planning approach to facilitate alignment on Phase objectives, Epic priorities, dependencies and risks
- Establish a Scaled Daily Scrum to coordinate work across teams and remove impediments





### Phase 3 Recommended Improvements

### Recommendation

Module & Module Requirements Prioritization	Prioritize each Mo most essential for
Scrum Masters approve additions to Phase 3	Limit changes to s exceed the capac
Solutioning	Conduct backlog the next Sprint in a
Sprint Start & End dates are synchronized across teams	It was decided to to facilitate planni
Sprint Entrance & Exit Criteria Definition	Establish a comm across all Scrum t
Task Creation & Tracking	Provide an overvie Story and tracking
Commit vs. Complete Measurement	Introduce the met Sprint Commitme

### Approach

odule and the Requirements for each Module to determine what is the r initial release.

scope for Phase 3 by having Scrum Masters approve changes to not city of Scrum teams.

refinement (Solutioning) in the current Sprint for Stories planned for order to get them Sprint Ready.

have the Start and End dates for Sprints to be the same for all teams ing, coordination and collaboration

non, minimum definition of Definition of Ready (DoR) and Done (DoD) teams.

ew of why tasking is essential in defining the scope of work for each g its progress to getting to Done on daily basis.

tric of Commit vs. Complete to emphasize the importance to meeting ents.



## Phase 3 Outcomes

Business Requirement (i.e., Epics) completion increased 300% from Phase 1 & 2 to Phase 3:

- 18 BRs completed in Phase 1 & 2
- 53 BRs completed in Phase 3









### Phase 3 Outcomes cont.

### Overall velocity stabilized across teams with Lyra and Cassiopeia teams finishing their modules early.













### Phase 3 Observations – What is Working Well

- End user feedback cycles decreased from quarterly to monthly.
- Core team, stakeholders and power users see the evolution of the solution on a regular basis via demos in order to provide feedback.
- The Business Analysts are decomposing requirements into User Stories.
- Data is pulled from Microsoft Team Foundation Server (TFS to track the progress of each Sales Force Module and each requirement per Module
- Technical debt is managed in parallel to business value delivery.
- The Scrum of Scrums focuses well on the holistic view of the program, the interdependencies, coordination and impediments that need to be addressed.
- The program management team (EAT) agrees to the definition of an impediment as something that blocks the team's progress in getting to done.
- The team uses a checklist for deploying software. This allows for consistent quality check.
- There are plans to hire another PO preferably in India, but this will not happen until Phase 5.





## Phase 3 - Lessons Learned

- Establish a complete cross functional team in each geographic location to minimize cross time zone dependencies and use a Scrum of Scrums for communication and coordination
- Define a common approach to metrics across teams for accurate transparency to progress and impediments
- Establish an EAT like leadership team and escalation path to rapidly resolve escalated impediments
- Extend release planning over multiple days to allow for full participation
- Reset leaderships expectations as to what is feasible based on limited time and capacity.
- Understanding of the 'must haves' vs. the 'nice to haves' using MoSCoW
- Increase the frequency of the end user feedback sessions to create more frequent feedback cycles





# Appendix





### Release Planning



**Release Planning** defines the objectives the Teams need to achieve for a specified measurable milestone, such as the launch of the MVP, to create alignment. All members from both teams participate. Release Planning consists of 3 half days to accommodate time zones

The Inputs are the following:

- Vision
- Road Map
- Top *n* prioritized Epics (Modules)

Outputs include the following:

- Alignment on the Release objectives
- Committed list of Epics the teams will complete in the • Release
- **Risk Mitigation Plan** •
- **Dependency Mapping**

**Release Demo & Retro** assesses how well the Teams met the objectives of the release based on review of the completed Features and key metrics. The collective team then conducts a Release Retro to determine areas to improve upon for the next Release. All members from both teams participate.

The Inputs are the following:

- Completed work
- **Key metrics**

Outputs include the following:

Plan to address process improvements for the next ۲ release.













### Sync Points are needed with Multiple Teams



©Jeff Sutherland & Scrum Inc 1993 – 2022

When more than one team is needed, some basic scaling conventions are used to keep multiple teams aligned. All teams within the platform should follow the same Sprint schedule so that Sprints are synchronized.

All teams are included in the Release Planning and Release Demo & Retro events. However additional events are needed to keep all teams marching forward as an integrated whole.

These include the following:

Scaled Daily Scrums is a regular occurring, time-boxed meeting where representatives from each Team to share progress on their Sprint Commitments, discuss dependencies between teams and the removal of any impediments that the teams are unable to remove. The SDS occurs daily.

Bi-Weekly Demo is intended to provide the JO and the Architect Team a snapshot of how the integrated solution is evolving each Sprint to provide feedback to the Dev Teams and determine if it is on track to meet the objectives of the Release within the defined time frame.











