Scrum in Research Science

Summary
As the application of Scrum grows beyond software engineering and IT, it is important to help people understand how to adapt it to these other areas. This talk will present a case study of a non-software implementation of Scrum to facilitate experimental research. The work facilitated is common to most research and medical laboratories. This will be an examination of the importance of maintaining Scrum values while modifying its practices to facilitate and organize hypothesis driven life science experimental work and its products.

Content
This talk will present a case study of a non-software implementation of Scrum within a protein applications research group. Learning will be presented on the management of hypothesis driven investigations and the management of laboratory work in general.
Applications development is a broad categorization of research that can include: validating laboratory workflows, investigating competitive technology, assisting with internal product development, and gathering exemplar data to be used in external marketing and sales material. Applications development groups are typically composed of PhD biochemists and biologists. Most of the day-to-day work is based on common experimental workflows found in most research and medical laboratories. Of unique interest to the general Scrum audience is the management of a non-product based workflow with the majority of the backlog composed of short duration biological experiments. The “product” in this context is a series of experimental outcomes that can be used to drive and validate product and marketing decisions. We will share how it’s important to embrace the spirit and principles of agile to give guidance when adapting Scrum to areas outside of traditional IT and software development.
We will go into some detail of how translating traditional Scrum concepts, including XP best practices, to something relevant and meaningful to experimental scientists can assist especially with early learning and with expectation setting with stakeholders. We’ll further explain other adaptations such as: developing a relevant hierarchy of work items, adapting roles, developing an overall vision, managing multiple stakeholders and creating meaningful iteration and release goals.
We firmly believe Scrum has resonance far beyond IT and software development and would very much enjoy sharing our experience in this area.

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