Use complex processes to develop a digital technologies outcome involves:

A1- Using **recognised** and appropriate **project management** tools and techniques to plan the development of a digital technologies outcome

* Agile/Scrum – Technique
* Trello – Tool

A2- **Decomposing** the digital technologies outcome into smaller components

* Planning Meeting – Designing on the diagram
* Product backlog – Breaking the problem into the managable sections, ie, Header, nav, footer, template, Introduction Page, About us page, etc.(based on user requirement)
* Sprint Planning Meeting – Break each task into smaller parts, create sprint backlog(sprint backlog is based on product backlog ; development is based on sprint backlog)
* Define: Definition of Done – What process need to be completed successfully for the component to be finished (web ready)?

**Evidence is required of YOUR individual contribution to all of these stages.**

A3- **Trialling** components of the outcome

* Required different versions of a component to be created and compared to determine their suitability and effectiveness. Each team member must have evidence of that they have trailed at least 1 component (1 trial of 3 versions)
* Evidence: 3 version of the component. The feedback of each version from each team member, the trailling process documented in definition of done.

A4- **Testing** that the digital technologies outcome functions as intended

* Testing is collaborative!
* Each component must be tested by: the developer, and each of the other team members! YES! THEY ARE TESTED AT LEAST 3 TIMES!
* Testing is by Checklist and written feedback in Trello. The written feedback is the most important!

A5- Addressing **relevant implications**.

* List the relevant implications for the COMPONENT. Describe how it has been addressed – can be done in Definition of Done.

Use complex processes to develop an informed digital technologies outcome involves:

M1- effectively using project management tools and techniques to manage development, feedback and/or collaborative processes

M2- effectively trialling multiple components and/or techniques

M3- effectively using information from testing and trialling to improve the functionality of the digital technologies outcome.

Use complex processes to develop a refined digital technologies outcome involves:

E1- synthesising information gained from the planning, testing and trialling of components

E2- discussing how this information led to the development of a high-quality digital technologies outcome.

Agile/Scrum/Trello -A1

Product backlog –A2

Sprint backlog –A2

Definition of Done –A4, A5

Sprint board –A1

Initial Planning meeting –

Initial planning meeting before starting development(因为每个人都有individual design, 所以需要team member 共同确定最后的Outcome

1. Decide which design you are gonging to adopt.
2. Decide which element to adopt for your final outcome.

Sprint planning meeting(start of each sprint) –A2

1. what are we going to achieve during this sprint?
2. Who’s doing it?

Standup meeting –A1

1. Daily , short
2. What I did yesterday? What I will do today? What has stopped me making the best progress? What is left to do in the sprint?

Review meeting –M3, E1

1. 展示完成工作。deliver result and get feedback

Retrospective meeting(end of each sprint) – M3, E1

1. improve for next sprint.
2. Start next sprint.

A1/A5/M1 file/asset management and versioning

1. Folder structure
2. File naming
3. Regular versions with description of the process as comments

Definition of Done for Navigation(key,core)(trialling)(mobile first)

This is a team work. Three people give feedback. You should log on your account and write your own feedback on somebody’s work on Trello. When teacher exports the activity log, he sees the interaction with the process on Trello. This is the evidence to produce individual test log for your work.

1. Your feedback for team member work;
2. Your testing your work.

* Version 1 complete
* Feedback
* Version 2 complete
* Feedback
* Version 3 complete
* Feedback
* Implement feedback(change on feedback)
* Final version decided by team
* Testing final version – Developer
* Testing final version – Team member 2
* Testing final version – Team member 3
* Testing final version – Team member 4
* Bugs fixed/improvements made
* Implications

1. Usability
   * + Addressed By
2. Functionality
   * + Addressed By etc.

background:

The world is changing everyday. 为了应对不断改变的user requirements, IT project management 把一个大的project, 细分成多个开发短周期。每个周期（sprint）（1-2 weeks）开始挑选(从product backlog)最重要的需求开发；每个sprint结束时有一个可以让用户看到的outcome。(有些像假期做的resume development的stage 1---stage 6.分为6个sprints, 每一个sprint结束时都有一个outcome给用户测试)

1. 监管政策改变；
2. 公司目标改变；
3. 老板，用户有新想法；
4. 突发情况， COVID-19 增加在线支付，减少现金。

**SCRUM 是一个用于开发和维护复杂产品的框架**

Scrum 是一个用于开发和维护复杂产品的框架 ，是一个增量的、迭代的开发过程。在这个框架中，整个开发过程由若干个短的迭代周期组成，一个短的迭代周期称为一个Sprint，每个Sprint的建议长度是2到4周(互联网产品研发可以使用1周的Sprint)。在Scrum中，使用产品Backlog来管理产品的需求，产品backlog是一个按照商业价值排序的需求列表，列表条目的体现形式通常为用户故事。Scrum团队总是先开发对客户具有较高价值的需求。在Sprint中，Scrum团队从产品Backlog中挑选最高优先级的需求进行开发。挑选的需求在Sprint计划会议上经过讨论、分析和估算得到相应的任务列表，我们称它为Sprint backlog。在每个迭代结束时，Scrum团队将递交潜在可交付的产品增量。 Scrum起源于软件开发项目，但它适用于任何复杂的或是创新性的项目。

Scrum流程如下图：

Diagram

Description automatically generated

Graphical user interface, text, application

Description automatically generated

1. Sprint: 指scrum团队完成一定数量工作所需的short, 固定的周期（period）.有些像假期做的resume development的stage 1---stage 6.分为6个sprints.
2. Product backlog: 产品按照商业价值排序的需求列表（decompose big task into small components. Decompose a big problem into groups of small problem.）
3. Sprint backlog: sprint 代办列表（指sprint 任务分解. 按照product backlog中需求列表的priority, 选择完成哪些tasks, 分配给谁完成，如何完成。Definition of done.
4. Roles:.
5. Product owner
6. Team members
7. Sprint master(manage and control the scrum process) 有些像 project team leader.
8. Website reference

[Scrum,敏捷开发,敏捷实践集 - Scrum中文网 (scrumcn.com)](https://www.scrumcn.com/agile/scrum-knowledge-library/scrum.html)

[Scrum in under 5 minutes - YouTube](https://www.youtube.com/watch?v=2Vt7Ik8Ublw)

<https://blog.hubstaff.com/agile-trello/>

Table

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Graphical user interface, application

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Diagram

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