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WATERFALL VS AGILE-SCRUM
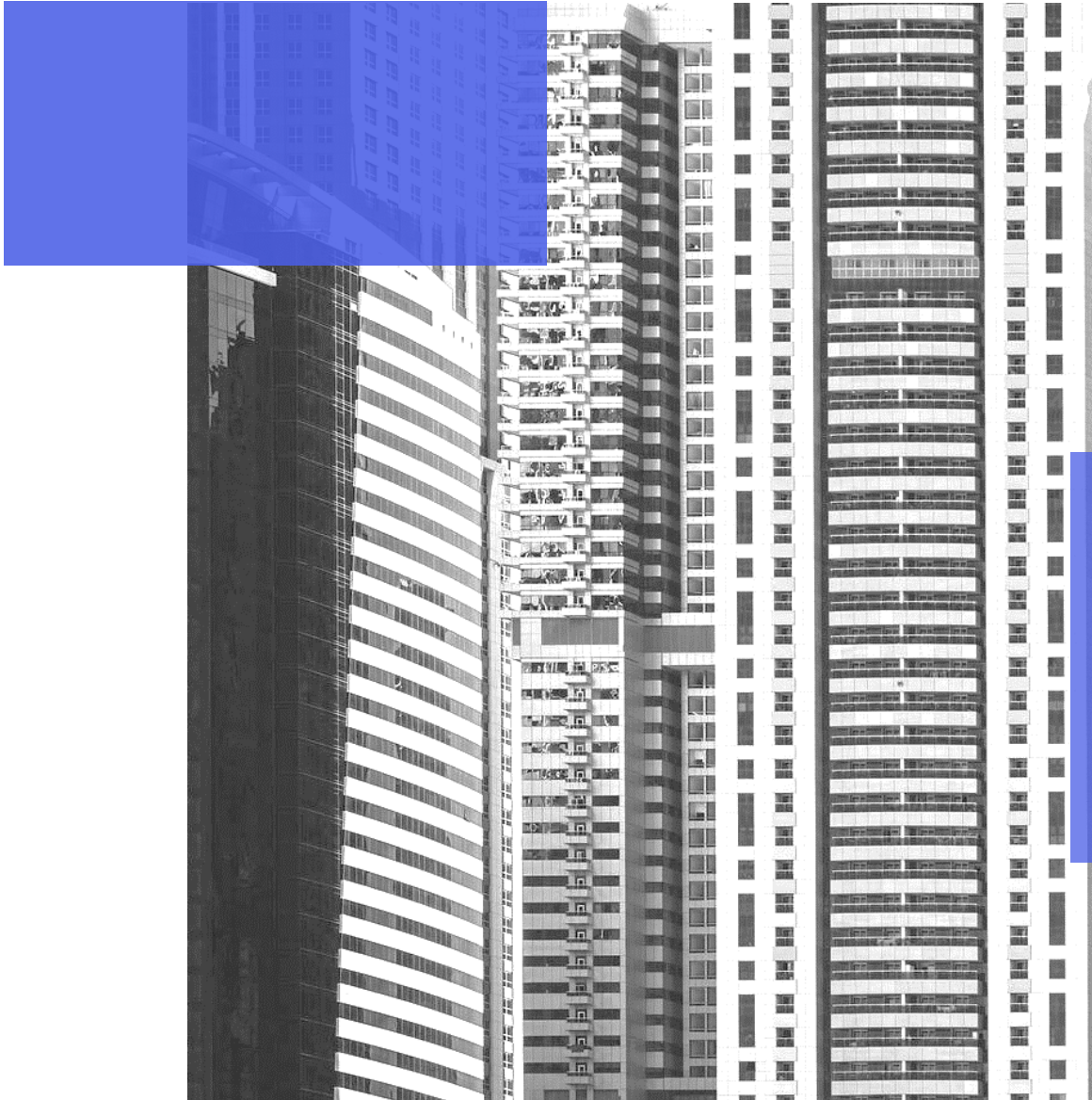
AGENDA

INTRO
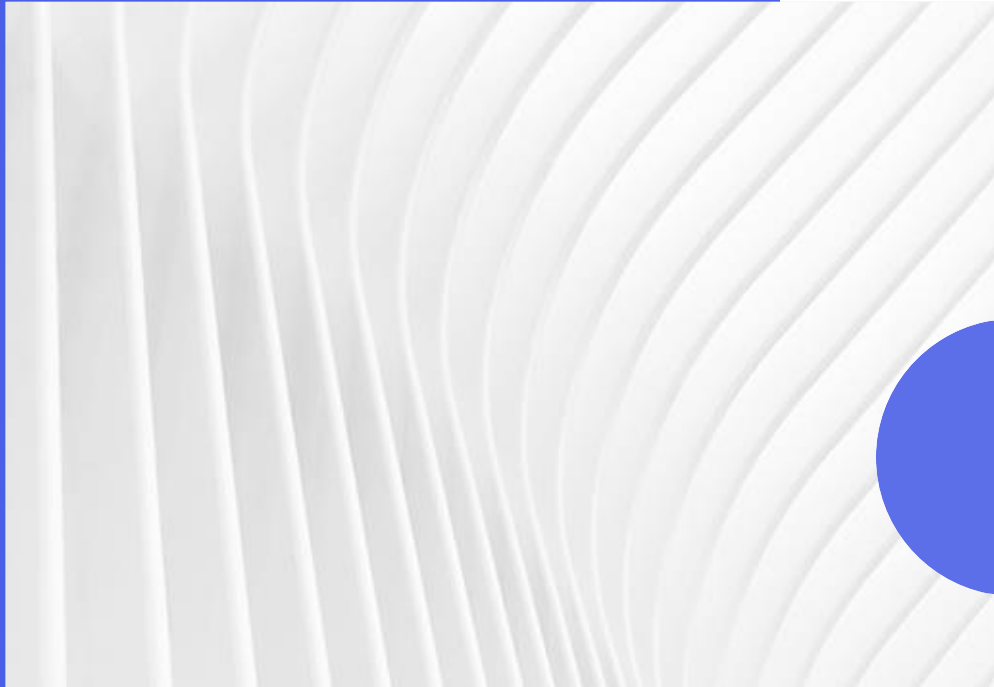
The software development process is one that usually benefits from an iterative approach, where code is delivered in small chunks and gets tested very frequently. ChadaTech would benefit from using Agile theory and the Scrum framework to deliver code of more quality and efficiency, and a more flexible development process.

AGILE ROLES

SCRUM FRAMEWORK

ROLES AND RESPONSIBILITIES

- **Product Owner**
  - Backlog management and disposition with scrum teams
  - Ensuring that the Product Backlog is visible, transparent, and clear to all, and shows what the Scrum Team will work on next

- **Scrum Master**
  - Understanding product planning in an empirical environment
  - Understanding and practicing agility
  - Coaching the Development Team in self-organization and cross-functionality
  - Helping employees and stakeholders understand and enact Scrum and empirical product development

- **Developers / Testers**
  - They are self-organizing. No one (not even the Scrum Master) tells the Development Team how to turn Product Backlog into increments of potentially releasable functionality
  - Scrum recognizes no sub-teams in the Development Team, regardless of domains that need to be addressed like testing or business analysis; there are no exceptions to this rule

AGILE PHASES

SCRUM FRAMEWORK

AGILE PHASES

- ## Initiation
  - This phase is where the scope and objectives of the project are defined
  - Product owner and stakeholder are the main role active at this point
  - Charter creation

- ## Sprint Planning
  - Planning an estimating processes
  - Creating user stories
  - Creating tasks
  - Creating a sprint backlog

- ## Sprint Execution
  - During this phase, you maintain an updated backlog, removing items as staff complete them and assigning out new items from the backlog as needed.
  - Scrum events
  - Deliverables

AGILE PHASES

- **Sprint Retrospective**
  - This meeting provides an opportunity to discuss what went well and where there are areas for improvement based on the results of the completed sprint.
  - Brainstorm ideas for further improvements, or to analyze the implementation capabilities of the completed work into the larger project
  - Determine if you can remove completed tasks from the backlog, or if you need to add them back

- **Release**
  - Deliver any final products to stakeholders, such as bringing a product to market or providing a client with the developed technology
  - Organizing a project retrospective meeting with your team to analyze the performance of each individual sprint and to discuss the overall performance of the project

SNHU TRAVEL: WATERFALL VS. AGILE

WATERFALL APPROACH

• The project management team would have required having all requirements set in stone upfront, and no major changes would be possible

• Requires a low chance for uncertainty based on factors like business, removing having to use a dynamic approach.

•Requires less resources since all the work is pushed into different phases, where for example, testers are only needed in the testing phase.
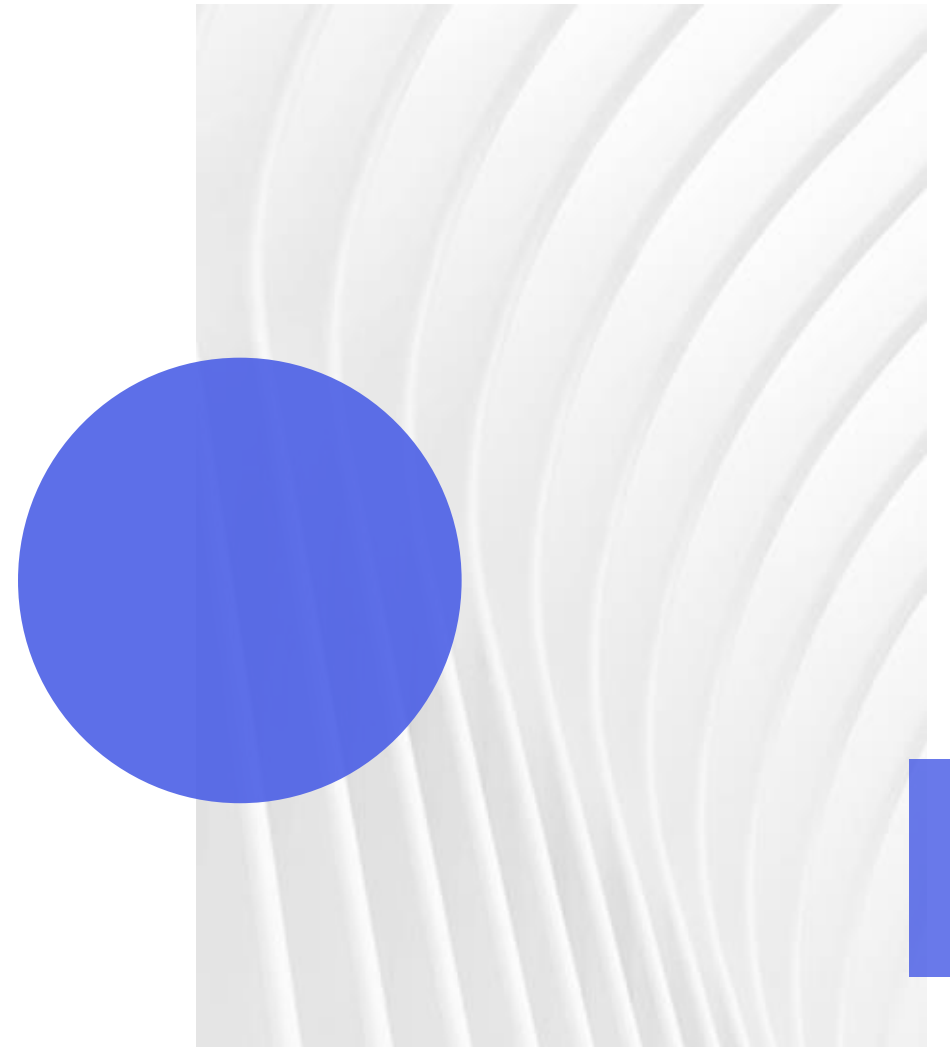
AGILE APPROACH

• All the requirements are not needed upfront allowing for a flexible approach

•It requires full commitment from multiple teams through the lifecycle

•Requires a lot of self initiative and self organization skills

•Should be used when the level of uncertainty is higher, and the business follows different trend constantly
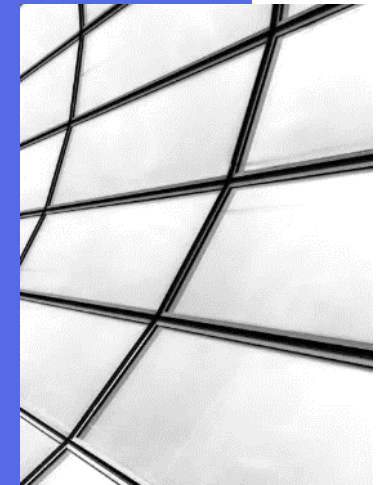
DECIDING: WATERFALL OR AGILE

It is important to realize that Agile isn't always the best method to execute the development of a product and being able to understand the business requirements will help understand the SDLC requirements. In some instances, the waterfall might be good as the approach because sometimes the business requirements are fully known and the chance of uncertainty is very small, and the number of resources available is minimal. For the SNHU Travel application, the decision to use Agile – Scrum proved to be the right one because the iterative approach really helped start developing the application with a very small amount of user stories provided upfront. Through the development of the user stories the customer notified us that a new trend was happening, and they would like to adjust their requirements to fir the new trend in the travel business.

REFERENCES

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THANK YOU

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