Value Chain Hackers - Documentation

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2 Welcome

Hello and a warm welcome to the Value Chain Hackers onboarding documentation! I'm Christiaan Verhoef, your guide, mentor, and fellow enthusiast in this exciting journey. Whether you're a student, mentor, or project manager, this guide is here to provide you with all the tools and insights you need to thrive in our vibrant community.

2.1 Our Mission

At Value Chain Hackers, we are on a mission to revolutionize the supply chain industry through relentless innovation, spirited collaboration, and hands-on practical application. We believe in empowering each individual to make meaningful contributions that drive real-world impact. Together, we will tackle the complexities of supply chains and transform challenges into opportunities.

2.2 What to Expect

Over the next 16 weeks, you'll dive into an immersive program designed to challenge your skills, broaden your horizons, and foster strong team dynamics. Here's a glimpse of what lies ahead:

- **Kick-off Hackathon**: Begin with an exhilarating one-day hackathon where you'll meet your team, brainstorm groundbreaking ideas, and set the stage for an unforgettable semester.
- **Bi-Weekly SCRUM Meetings**: Engage in regular check-ins to discuss progress, overcome obstacles, and ensure we are all aligned with our project goals.
- **Mentorship and Support**: Gain from the wisdom and experience of our dedicated mentors, who will act as your patrons, guiding you every step of the way.
- **Hands-On Projects**: Work on real-world supply chain problems, applying your skills and creativity to develop innovative solutions that make a difference.
- **Celebration and Recognition**: Conclude the semester with a grand closing ceremony where you'll showcase your findings, share your experiences, and celebrate your achievements together.

2.3 Getting Started

1. **Read the Documentation**: Dive into the program structure, roles, and responsibilities by reading through this comprehensive documentation.
2. **Join Our Communication Channels**: Connect with your peers and mentors on Discord and stay updated with official announcements via Nextcloud.
3. **Set Up Your Tools**: Ensure you have access to all necessary tools, including Taiga for project management, GitLab for version control, and Jitsi for virtual meetings.
4. **Participate Actively**: Immerse yourself in all scheduled activities, contribute to discussions, and collaborate with your team to maximize this learning experience.

2.4 Contact Information

If you have any questions or need assistance, don't hesitate to reach out:

- **Email**: cg.verhoef@windesheim.nl
- **Discord**: Join our server here

2.5 Conclusion

We are thrilled to have you on board and cannot wait to witness the amazing things you'll achieve as part of the Value Chain Hackers program. Together, let's embark on this transformative journey and make a lasting impact in the world of supply chain management!

Welcome to the team!

Christiaan Verhoef
Value Chain Hackers Leader

3 Introduction

4 Introduction

Welcome to the Value Chain Hackers! In this program, you will embark on an exciting journey to revolutionize the supply chain industry through innovation, collaboration, and practical application. Our goal is to equip you with the tools, knowledge, and support you need to make meaningful contributions and drive real-world impact.

Throughout this program, you'll be challenged to think critically, work collaboratively, and apply your skills to solve complex supply chain problems. You'll have the opportunity to learn from experienced mentors, engage with industry experts, and collaborate with peers who share your passion for innovation.

Get ready to dive into a dynamic and immersive experience that will push your boundaries, expand your horizons, and prepare you to become a leader in the supply chain industry. Together, we'll transform challenges into opportunities and create a brighter future for supply chain management.

4.1 Inspiring Videos

To kickstart your journey, here are some inspiring videos that explore themes related to supply chains, innovation, and teamwork. These videos highlight the power of creativity, resilience, and collaboration in overcoming challenges and achieving success:

4.1.1 How Wolves Change Rivers

An incredible story about how the reintroduction of wolves to Yellowstone National Park changed the entire ecosystem, illustrating the powerful impact of a single change in a system.

Figure 4.1: How Wolves Change Rivers

4.1.2 Simon Sinek: How Great Leaders Inspire Action

Simon Sinek discusses the concept of "Start With Why" and how leaders inspire action by focusing on their purpose and values.

Figure 4.2: How Great Leaders Inspire Action

4.1.3 RSA ANIMATE: Drive: The surprising truth about what motivates us

An animated version of Dan Pink's talk on motivation, exploring the science behind what drives us to work harder and be more creative.

Figure 4.3: Drive: The surprising truth about what motivates us

4.1.4 The Power of Vulnerability - Brené Brown

Brené Brown shares her research on vulnerability, highlighting its importance in fostering innovation, creativity, and change.

Figure 4.4: The Power of Vulnerability

These videos will not only inspire you but also provide valuable insights into innovation, resilience, and the power of teamwork. Enjoy watching them as you embark on your Value Chain Hackers journey!

Let's get started!

5 Why

6 Why

6.1 Why Value Chain Hackers

Welcome to Value Chain Hackers! We are on a mission to revolutionize the supply chain industry through innovation, collaboration, and practical application. By providing you with the necessary resources and building strong, agile teams, we ensure that our participants can make meaningful contributions to the field of supply chain management. Together, we'll tackle the complexities of supply chains and transform challenges into opportunities.

6.1.1 Unleashing Your Potential

Our program is all about unlocking your potential. We believe that every participant has unique strengths and talents that, when harnessed, can lead to extraordinary results. Through Value Chain Hackers, you'll have the opportunity to discover and develop your abilities in a supportive and dynamic environment.

6.1.2 Real-World Impact

We're not just playing around here—our goal is to make a real difference in the world. The supply chain industry is vast and complex, playing a crucial role in our daily lives. By improving supply chains, we can enhance efficiency, reduce waste, and create more sustainable practices. Your work here can lead to tangible, positive changes in the industry and beyond.

6.1.3 Innovation and Creativity

Innovation is at the heart of everything we do. We encourage you to think outside the box, experiment with new ideas, and push the boundaries of what's possible. This is your chance to bring fresh perspectives to the table and come up with creative solutions to challenging problems. Let's have fun with it and see where our imagination can take us!

6.1.4 Collaboration and Community

One of the best parts of Value Chain Hackers is the sense of community. You'll be working alongside passionate individuals who are just as excited about supply chain innovation as you are. Together, we'll build a collaborative environment where ideas can flow freely, and everyone's contributions are valued. Whether it's through brainstorming sessions, hackathons, or casual chats over coffee, you'll find that the power of teamwork can lead to amazing breakthroughs.

6.2 Why Online Learning & Digital Lab

6.2.1 Flexibility and Accessibility

The digital lab provides unparalleled flexibility and accessibility. No matter where you are in the world, you can participate in our program. This allows us to bring together a diverse group of individuals, fostering a rich environment of different perspectives and ideas. Online learning means you can fit your participation around other commitments, ensuring you can engage fully without sacrificing other important aspects of your life.

6.2.2 Cutting-Edge Tools and Resources

By leveraging digital platforms, we provide access to a range of cutting-edge tools and resources. From project management software like Taiga to collaboration tools like Nextcloud and Etherpad, you'll have everything you need at your fingertips. These tools not only facilitate efficient workflow but also enhance your learning experience.

6.2.3 Interactive and Engaging Content

Our online learning approach is designed to be interactive and engaging. With virtual meetings via Jitsi, real-time document editing, and dynamic feedback systems, you'll be actively involved in your learning process. This keeps the experience lively and ensures that you're not just passively consuming information.

6.3 Why AI for Supply Chain

6.3.1 Enhancing Efficiency

AI has the power to transform supply chains by enhancing efficiency. From predictive analytics to automated decision-making, AI tools can help identify bottlenecks, optimize routes, and

forecast demand with greater accuracy. This leads to more efficient operations and significant cost savings.

6.3.2 Driving Innovation

AI is at the forefront of technological innovation. By integrating AI into supply chain management, we open up new possibilities for problem-solving and process improvement. AI can analyze vast amounts of data quickly, providing insights that would be impossible to achieve manually. This drives innovation and helps us stay ahead of industry trends.

6.3.3 Improving Sustainability

AI can also contribute to more sustainable supply chains. By optimizing resources and reducing waste, AI-driven solutions can help companies achieve their sustainability goals. This is increasingly important in a world where environmental considerations are critical to business success.

6.4 Why Scrum Agile Working Methodology

6.4.1 Flexibility and Adaptability

Scrum is all about flexibility and adaptability. In a fast-paced industry like supply chain management, the ability to pivot quickly in response to changing conditions is crucial. Scrum provides a framework that allows teams to respond to changes efficiently, ensuring that projects stay on track even when unexpected challenges arise.

6.4.2 Enhancing Team Collaboration

Scrum emphasizes teamwork and collaboration. By working in sprints and holding regular stand-up meetings, team members stay aligned and engaged. This fosters a collaborative environment where everyone's input is valued, and the collective effort leads to better outcomes.

6.4.3 Continuous Improvement

One of the core principles of Scrum is continuous improvement. Through regular retrospectives, teams reflect on their processes and identify areas for enhancement. This commitment to ongoing improvement ensures that we are always striving to be better, delivering higher quality results with each iteration.

6.4.4 Clear Goals and Accountability

Scrum provides clear goals and accountability. Each sprint has specific objectives, and team members know exactly what is expected of them. This clarity helps keep everyone focused and motivated, driving progress and ensuring that we meet our targets effectively.

7 How

8 How

8.1 How Do We Ensure Our Feedback Is Taken Seriously?

8.1.1 Clear Communication

To ensure our feedback is taken seriously, we prioritize clear and concise communication. We use structured feedback forms and ensure that all comments are actionable and specific. This way, our suggestions are easy to understand and implement.

8.1.2 Constructive Criticism

We focus on providing constructive criticism that is aimed at helping teams improve. By highlighting strengths along with areas for improvement, we create a balanced feedback environment that encourages growth and development.

8.1.3 Regular Feedback Sessions

Regular feedback sessions are scheduled to ensure continuous improvement. These sessions provide an opportunity for open dialogue between students, mentors, and project managers, fostering a culture of trust and collaboration.

8.2 How Can We Make Students Report More Often?

8.2.1 Streamlined Reporting Tools

We provide easy-to-use reporting tools like Taiga for project management and Nextcloud for document sharing. These tools simplify the reporting process, making it quick and efficient for students to submit their progress updates.

8.2.2 Gamification

To make reporting more engaging, we incorporate gamification elements. Students can earn points and badges for timely and thorough reports, which can be redeemed for rewards or recognition at the end of the semester.

8.2.3 Regular Check-Ins

We schedule regular check-ins to keep students on track. These bi-weekly SCRUM meetings ensure that everyone is aligned with their goals and any issues are addressed promptly.

8.3 How Can We Get Teachers to Act as Coaches in Our Project?

8.3.1 Roman-Patreon Model

We adopt the Roman-Patreon model, where experienced teachers act as mentors (patrons) to students (protégés). Teachers are matched with students based on their expertise and interests, fostering a supportive mentor-mentee relationship.

8.3.2 Incentives for Teachers

We provide incentives for teachers to participate as coaches. This can include professional development opportunities, recognition in the academic community, and tangible rewards like gift vouchers or certificates of appreciation.

8.3.3 Collaborative Workshops

We organize collaborative workshops where teachers and students can work together on projects. These workshops provide a platform for teachers to share their knowledge and guide students through practical, hands-on activities.

8.4 How Can We Motivate Students Sufficiently?

8.4.1 Engaging Activities

We incorporate fun and engaging activities throughout the program. From icebreakers and team-building exercises to themed hackathons and social events, there's always something exciting happening to keep students motivated.

8.4.2 Recognition and Rewards

We recognize and reward students for their hard work and achievements. This includes certificates of achievement, internship opportunities, and gift vouchers for outstanding performance.

8.4.3 Clear Goals and Milestones

We set clear goals and milestones to keep students focused and motivated. By breaking down projects into manageable tasks and celebrating each milestone, we create a sense of progress and accomplishment.

8.4.4 Supportive Community

We foster a supportive community where students feel valued and encouraged. Open communication channels, regular mentorship sessions, and peer support groups help create an environment where everyone can thrive.

8.5 Tracking Projects in a Digital Space

8.5.1 Project Management Tools

We use Taiga, an open-source agile project management platform, to manage tasks, sprints, and backlogs. This tool helps students stay organized and track their progress in real-time.

8.5.2 Collaborative Platforms

Nextcloud and Etherpad are our go-to tools for collaboration. These platforms allow students to share documents, edit them in real-time, and keep track of changes, ensuring seamless teamwork.

8.5.3 Regular Updates

Students are encouraged to provide regular updates on their progress. This can be done through bi-weekly SCRUM meetings, monthly consortium meetings, and real-time updates on our digital platforms.

8.5.4 Visual Dashboards

We provide visual dashboards that display project progress, upcoming tasks, and completed milestones. These dashboards make it easy for students to see their achievements and stay motivated.

8.6 Conclusion

By implementing these strategies, we ensure that our feedback is valued, students are engaged and motivated, and projects are effectively tracked in a digital space. Together, we create a dynamic and supportive environment where innovation and collaboration thrive. Let's make this journey exciting and impactful!

9 What

10 What

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11 Tools

12 Tools

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13 Student Flow

14 Student Flow

Welcome to the Value Chain Hackers program! Here's a detailed flow of your journey through the semester, designed to ensure you get the most out of this experience. Let's dive in!

14.1 1. Kick-off Hackathon

14.1.1 Meet Your Team

- **Objective**: Get to know your teammates, mentors, and project managers.
- **Activities**: Icebreakers, team-building exercises, and brainstorming sessions.
- **Outcome**: Establish initial commitments and project goals.

14.2 2. Project Initialization

14.2.1 Set Up Your Tools

- **Objective**: Ensure you have access to all necessary tools.
- **Tools**: Taiga for project management, GitLab for version control, Nextcloud for file sharing, Jitsi for virtual meetings, and Etherpad for real-time collaboration.
- **Outcome**: Familiarize yourself with the tools and their functionalities.

14.2.2 Initial Planning

- **Objective**: Plan your project and define the scope.
- **Activities**: Create a project roadmap, assign tasks, and set deadlines.
- **Outcome**: A clear project plan with defined milestones.

14.3 3. Bi-Weekly SCRUM Meetings

14.3.1 Regular Check-ins

- **Objective**: Discuss progress, tackle challenges, and ensure alignment with project goals.
- **Activities**: Stand-up meetings, progress reports, and problem-solving sessions.
- **Outcome**: Stay on track and address any issues promptly.

Refer to the Scrum Process for more details on the key components and cycle of SCRUM.

14.4 4. Ongoing Mentorship and Support

14.4.1 Mentor Sessions

- **Objective**: Receive guidance and support from experienced mentors.
- **Activities**: One-on-one meetings, feedback sessions, and collaborative problem-solving.
- **Outcome**: Gain valuable insights and improve your project continuously.

14.5 5. Monthly Cohesion Meetings

14.5.1 Strengthen Teamwork

- **Objective**: Strengthen the bond within your team and address any issues.
- **Activities**: Team-building exercises, open discussions, and collaborative activities.
- **Outcome**: Enhanced teamwork and a supportive team environment.

14.6 6. Consortium Meetings

14.6.1 Share Progress and Exchange Ideas

- **Objective**: Share your progress with external stakeholders and receive feedback.
- **Activities**: Presentations, Q&A sessions, and collaborative discussions.
- **Outcome**: Valuable feedback and new ideas to improve your project.

14.7 7. Quarterly Status Updates

14.7.1 Assess and Prepare

- **Objective**: Assess your progress and prepare for upcoming milestones.
- **Activities**: Status update meetings, milestone reviews, and planning sessions.
- **Outcome**: Stay aligned with project goals and prepare for key presentations.

14.8 8. Semester Closing

14.8.1 Final Presentations

- **Objective**: Present your work, findings, and recommendations.
- **Activities**: Formal presentations, Q&A sessions, and feedback discussions.
- **Outcome**: Showcase your achievements and receive recognition for your hard work.

14.8.2 Celebration and Networking

- **Objective**: Celebrate your achievements and network with peers, mentors, and industry professionals.
- **Activities**: Dinner, drinks, and social events.
- **Outcome**: Build lasting connections and celebrate the end of a successful semester.

14.9 9. Continuous Improvement

14.9.1 Reflect and Improve

- **Objective**: Reflect on your experiences and identify areas for improvement.
- **Activities**: Retrospective meetings, feedback sessions, and personal reflections.
- **Outcome**: Learn from your experiences and prepare for future challenges.

Refer to the Scrum Process to understand the continuous improvement mechanisms embedded in the SCRUM methodology.

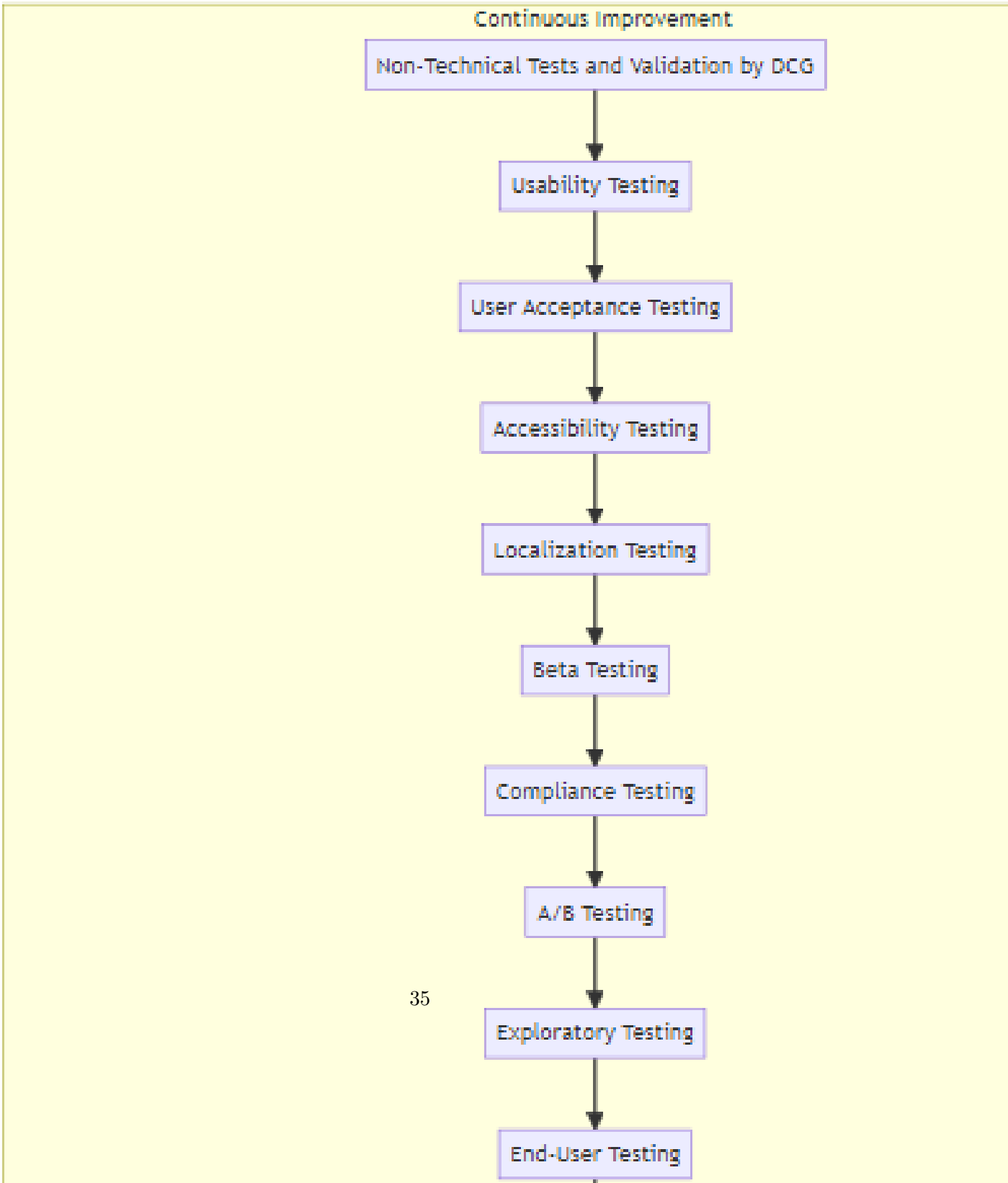
14.10 Conclusion

Your journey through the Value Chain Hackers program is designed to be dynamic, engaging, and impactful. By following this flow, you'll gain valuable skills, make meaningful contributions, and have a fantastic time along the way. Let's embark on this exciting journey together!

15 Scrum Process

16 Scrum Process

16.1 Key Components of Scrum



Product Backlog
The Product Backlog is an ordered list of everything that might be needed in the product and

Sprint Planning
Sprint Planning is a collaborative meeting where the Scrum Team discusses what can be delive

Sprint Backlog
The Sprint Backlog is a list of tasks that the Scrum Team commits to completing during the s

Daily Scrum
The Daily Scrum is a short, time-boxed meeting (usually 15 minutes) where the team synchroni

Development Work
During the sprint, the Scrum Team works on the tasks in the Sprint Backlog to create a poten

Increment
An Increment is the sum of all the Product Backlog items completed during a sprint and all p

Sprint Review
The Sprint Review is held at the end of the sprint to inspect the increment and adapt the Pr

Sprint Retrospective
The Sprint Retrospective is an opportunity for the Scrum Team to inspect itself and create a

Product Backlog Refinement
Product Backlog Refinement is the ongoing process of reviewing and amending the Product Back

Scrum Cycle

Start with the Product Backlog
The Product Owner maintains and prioritizes the Product Backlog based on stakeholder input a

Sprint Planning
The Scrum Team selects items from the Product Backlog for the Sprint Backlog, defines the sp

Daily Scrum Meetings
The team meets daily to synchronize efforts, identify impediments, and adjust plans as neede

Development Work
The team works on tasks in the Sprint Backlog, aiming to create a potentially shippable prod

Sprint Review
At the end of the sprint, the team reviews the increment with stakeholders and adapts the Pro

Sprint Retrospective
The team reflects on the sprint process, identifies improvements, and plans for the next spri

Repeat
The cycle repeats with the next Sprint Planning meeting, building upon the continuous improve

Why

The European Union (EU) emphasizes innovation, efficiency, and high-quality outputs in its fu

How

Agile-Scrum achieves these objectives through its dynamic and responsive framework. By utiliz

What

By adopting Agile-Scrum, EU-funded projects can significantly increase their success rates ar

1. Flexibility and Responsiveness to Change

Dynamic Market Needs

- **Traditional Approach:** The Waterfall model, commonly used in traditional EU-funded proje
- **Agile-Scrum:** Agile methodologies, particularly Scrum, are designed to handle change. Sc

Empirical Process Control

- **Traditional Approach:** Relies on a detailed upfront specification and planning, which as
- **Agile-Scrum:** Uses an empirical process control model, which emphasizes inspection, adap

2. Incremental Delivery and Early Value Realization

Incremental Value Delivery

- **Traditional Approach:** Often, deliverables in traditional projects are only produced tow
- **Agile-Scrum:** Emphasizes incremental delivery of product increments at the end of each s

Risk Mitigation

- **Traditional Approach:** Risk is often identified and managed through extensive planning p

```
- **Agile-Scrum:** By delivering work in small, manageable increments and continuously integr

### 3. Enhanced Stakeholder Collaboration and Communication

#### Engagement and Transparency

- **Traditional Approach:** Stakeholder engagement typically occurs at predetermined milestor
- **Agile-Scrum:** Involves stakeholders throughout the project lifecycle through regular spr

#### Collaborative Environment

- **Traditional Approach:** Often promotes siloed work environments where teams may work inde
- **Agile-Scrum:** Encourages a collaborative, cross-functional team environment. Teams work

### 4. Continuous Improvement and Quality Focus

#### Iterative Quality Assurance

- **Traditional Approach:** Quality assurance is typically a distinct phase near the end of t
- **Agile-Scrum:** Integrates continuous testing and quality assurance into each sprint. This

#### Retrospective Culture

- **Traditional Approach:** Project evaluations and lessons learned sessions are usually conc
- **Agile-Scrum:** Incorporates regular sprint retrospectives, allowing the team to reflect c

## Why Scrum is Right for This EU Funding Call

### 1. Alignment with EU's Innovation Goals

#### Flexibility and Responsiveness to Change

- **EU Perspective:** The European Union emphasizes innovation and adaptability in its fundir
- **Supporting Data:** Agile projects are roughly twice as likely to succeed compared to trac

### 2. Efficient Use of Resources

#### Incremental Delivery and Early Value Realization

- **EU Perspective:** The EU aims to maximize the impact of its funding by ensuring that proj

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```
A[Product Backlog] -->|Select Items| B[Sprint Planning]
B --> C[Sprint Backlog]
C --> D[Daily Scrum]
D --> E[Development Work]
E --> F[Increment]
F --> G[Sprint Review]
G --> H[Sprint Retrospective]
H --> I[Product Backlog Refinement]
I --> B

subgraph Sprint
    C --> D
    D --> E
    E --> F
    F --> G
    G --> H
    H --> I
end

subgraph Project Initiation
    A1[Kickoff Meeting] --> A2[Project Charter]
    A2 --> A3[Communication Plan]
    A3 --> A4[Project Management Tool Setup]
    A4 --> A
end

subgraph Exploration and Planning Phase
    B1[Exploration Meetings] --> B2[User Stories]
    B2 --> B3[User Personas]
    B3 --> B4[Journey Maps]
    B4 --> B5[Sprint 0 Planning]
    B5 --> B6[Product Backlog]
    B5 --> B7[Definition of Done]
    B5 --> B8[Sprint Plan]
end

subgraph Sprint Execution Phase
    C1[Sprint Planning Meetings] --> C2[Sprint Backlog]
    C2 --> C3[Sprint Goal]
    C4[Daily Stand-Up Meetings] --> C5[Daily Status Updates]
    C5 --> C6[Issue Log]
    C7[Sprint Review Meetings] --> C8[Increment]
    C8 --> C9[Stakeholder Feedback]
```

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    C10[Sprint Retrospective Meetings] --> C11[Retrospective Report]
    C11 --> C12[Improvement Plan]
end

subgraph Product Development Specifics for WP 3.2
    D1[System Architecture Design Workshops] --> D2[System Architecture Document]
    D3[Smart Contract Development Sessions] --> D4[Smart Contract Code]
    D4 --> D5[Smart Contract Documentation]
    D6[UI/UX Design Workshops] --> D7[UI Wireframes]
    D7 --> D8[UI Mockups]
    D8 --> D9[Developed UI Components]
    D10[Integration Planning Meetings] --> D11[Integration Plan]
    D11 --> D12[Implemented APIs]
end

subgraph Quality Assurance and Testing
    E1[Testing Planning Meetings] --> E2[Test Plans]
    E2 --> E3[Test Cases]
    E4[Regular Testing Sessions] --> E5[Unit Testing Report]
    E5 --> E6[Integration Testing Report]
    E6 --> E7[Performance Testing Report]
    E7 --> E8[Security Testing Report]
    E8 --> E9[Compatibility Testing Report]
    E9 --> E10[Regression Testing Report]
    E10 --> E11[Load Testing Report]
    E11 --> E12[Stress Testing Report]
end

subgraph Documentation and Training
    F1[Documentation Workshops] --> F2[System Documentation]
    F3[Training Sessions] --> F4[Training Materials]
    F4 --> F5[Training Reports]
    F6[SDA Bocconi Training] --> F7[Introductory Training on Framework]
end

subgraph Continuous Improvement
    G1[Ongoing Retrospective Meetings] --> G2[Continuous Improvement Plan]
    G3[Non-Technical Tests and Validation by DCG] --> G4[Usability Testing]
    G4 --> G5[User Acceptance Testing]
    G5 --> G6[Accessibility Testing]
    G6 --> G7[Localization Testing]
    G7 --> G8[Beta Testing]
    G8 --> G9[Compliance Testing]
```

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        G9 --> G10[A/B Testing]
        G10 --> G11[Exploratory Testing]
        G11 --> G12[End-User Testing]
        G12 --> G13[Scenario-Based Testing]
        G13 --> G14[GUI Testing]
        G14 --> G15[Documentation Testing]
        G16[Maintenance Strategy by VIRIDIS] --> G17[Maintenance Strategy Document]
    end


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17 Roles

18 Roles

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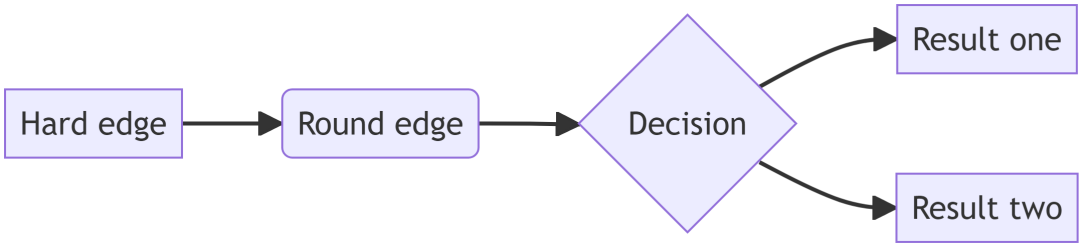
19 Roles

In this section, we define the various roles involved in the Value Chain Hackers program.

19.1 Roles and Responsibilities



20 Resources

21 Resources

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22 Summary

23 Summary

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24 References

25 References

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