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DevOps Flow 1.1

The Ideal Resource for **Agile Software Development**

→

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INTRO DUCTION

Imagine you are a developer working on a complex software project.

You're dealing with a lot of code, multiple versions, and a team that needs to collaborate in an agile and efficient environment.

In this context, can you ensure that everyone is working in sync and that the work is being delivered with the desired quality?

This e-book will show you how to use Webera DevOps Flow 1.1 to solve this problem.

Here, you will find some fundamental concepts of Business Agility and how this methodology can transform your development team's efficiency, transparency, and collaboration.

Webera DevOps Flow 1.0 aims to improve software quality, allowing you to reach new heights of excellence and deliver high-quality products faster and more efficiently.

It will give you a complete understanding of how to improve your workflows, making them more efficient and transparent, as well as enabling more agile and effective collaboration.

If you are looking to optimize your agile software development processes, this e-book is for you.

01

Value Stream: the way to attain Business Agility.

Before we start, we should do a thought exercise...

So, suppose that you are in a relay race, and your team members need to pass a baton, from one to another, along the track.

If the team does not know when to pass the baton or takes a long time to do it, it will lose time and not reach its objective.

The same thing goes for the software development process! Each team member must know when and how to hand off work to the next colleague to create a continuous and efficient flow. This is where the Value Stream concept comes into play!

Value Stream is a methodology that maps the entire software development process **from conception to the final delivery**.

This includes all activities, from planning and design to development, testing, and implementation.

By mapping the entire process, it is possible to identify bottlenecks and areas where time and resources are wasted.

By applying the Value Stream concept, developers can achieve Business Agility. This ensures the team can deliver high-quality products more quickly and efficiently, meeting customer needs and adapting quickly to market changes.

After a thorough mapping process, the team can identify opportunities to improve workflow by eliminating unnecessary activities and focusing on tasks of greater value to the customer. With this, developers can reduce the cycle time and improve the quality of the software produced.

To better understand how this applies, take a look at the table below, which makes a comparison between functional management and the Value Stream:

	Functional Management	Value Stream
Focus	Team silos are focused on specific departments	Focus on the software development process
Mapping Process	Isolated processes focused on a single team or department	Thorough mapping of the entire process, from conception to delivery
Troubleshooting	Limited to the team's specific area of expertise	Identification of bottlenecks and waste throughout the process
Aim	Fulfillment of the specific activities of each team	Delivering value to the customer with quality, speed, and efficiency
Communication	Communication is limited to a specific team or department	Broad and collaborative communication between all teams involved in the process
Decision making	Decisions made based on information limited to the team's specific area of expertise	Decision-making based on information from the complete process, with analysis of the impact on the entire process

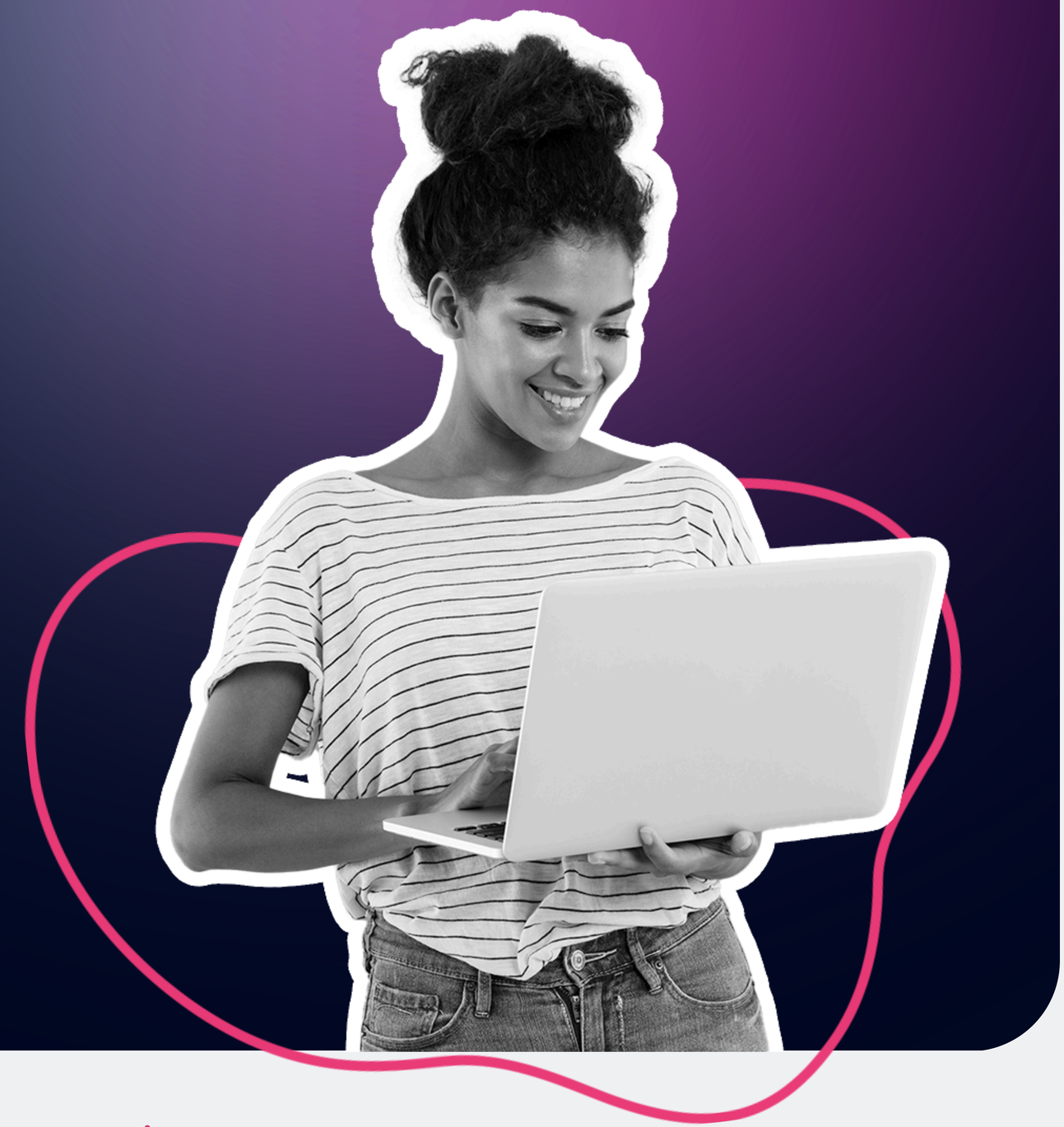
As you can see, applying the Value Stream concept is essential for developers to achieve Business Agility.

This work format allows high-quality products to be developed quickly and efficiently, meeting customer needs and quickly adapting to market changes. This can be achieved using tools like Git Workflow. Check out more below!

Value Stream: the way to attain Business Agility.

02

Git Workflow: unraveling the concept.



Git Workflow is a software development methodology aimed at optimizing the workflow between developers and delivering value to the customer.

The method is based on the Value Stream concept, which has been shown before. This concept describes the software development process, from conception to the delivery of the final product.

In addition, Git Workflow offers several tools and practices that can be used to optimize the development process and minimize waste.

By using Git Workflow with Value Stream mapping, development teams can gain a clearer view of the development process as a whole.

It is, then, possible to identify bottlenecks, areas of waste, and inefficiencies in the process and take measures to correct them. This leads to a more efficient development process, with higher quality and greater value delivered to the customer.

Git Workflow allows development teams to collaborate on projects and share code. All this while having **strict control over the changes made to the code**.

03

Webera DevOps Flow 1.0: discover our workflow

Webera 1.0 is a project management workflow developed with the concern of not being just a tool or a process, but a solution that allows teams to work collaboratively and efficiently.

Webera 1.0 is designed to provide a code production line, which includes building, versioning, testing, and deploying the product. All this in a collaborative and integrated environment.

The next page displays a step-by-step description of the production line adopted in Webera projects:

Webera DevOps Flow 1.0

The developer moves a story from the “next up” column to the “in progress” column and creates a new feature branch from the main branch;

The developer then writes the required code for the story in the feature branch;

The developer then opens a pull request to merge the new code into the main branch;

Another developer reviews the code locally, to ensure it works correctly, before approving the pull request;

Once the pull request is approved, the code will be merged into the main branch, and the feature branch will be deleted;

This process is performed within the application repository;

Application Repository **Application Repository**

Once the code is merged into the main branch, a GitHub Action is triggered to build the code, run unit tests, and upload the image to the registry with the commit ID tag;

If the build or test fails, an alert is sent to the development team that the main branch is broken;

Webera DevOps Flow 1.0: discover our workflow.

Webera DevOps Flow 1.0

Once the feature is validated, a developer can create a new release to production on the application repository, triggering a message to the Platform Repository with the repository name, Git SHA, and target environment (production). At this point, the developer can move the story to “in review” status;

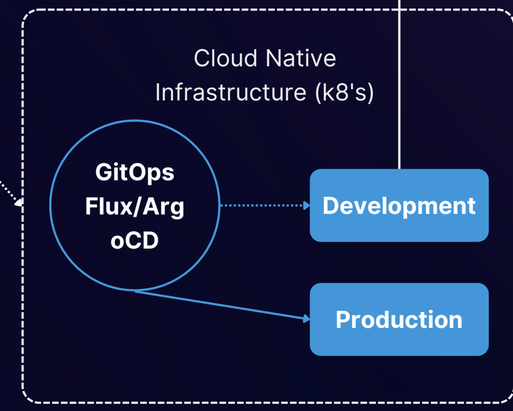
The Platform Repository receives the message and opens a pull request on itself with the image tag to be applied on the production environment;

Once the Product Owner validates the feature on Edge/Develop environment or a DevOps approves the pull request in case of an emergency, the image tag will be merged into the main branch and pushed to the product via GitOps Flow.

Once the code is deployed to Edge/Develop environment, the development team and automated tests can validate the feature;

Platform Repository

In the Platform Repository, GitOps tools are used to apply and maintain the K8s configuration to prevent drifting;



If the build and test are successful, the GitHub Action sends a call to the Platform Repository with the repository name, Git SHA, and target environment (edge);

Webera DevOps Flow 1.0: discover our workflow.

With Webera 1.0, it is possible to work on projects in an **integrated way**, with **all team members actively involved in developing quality products**.

04

Advantages of using a workflow in **software projects**

Using Webera DevOps Flow 1.0 in your business will soon give you many benefits.

These are the main ones:

More organization

A well-defined workflow helps keep the project organized and structured, with straightforward tasks and responsibilities for each team member.

More efficiency

A defined and automated workflow can increase project efficiency and decrease time spent on repetitive tasks.

Error reduction

With a well-defined and tested workflow, it is possible to reduce development errors, guaranteeing the software's quality.

Ease of monitoring

With a well-defined workflow and tracking tools, you can easily visualize project progress and identify issues.

Better communication

A well-defined workflow helps team members communicate better, which allows them to share information and make decisions.

More scalability

Workflows can easily scale to larger projects, maintaining organization and efficiency even as team size or work complexity increases.

Process standardization

A standardized workflow helps maintain consistency in the development process. This ensures tasks are performed similarly and follow the same steps across all projects.

Ease of integration

You can easily integrate the workflow with other tools and processes, such as project management or source version control.

Better resource management

With a well-defined workflow, you can better manage available resources such as time, teams, and budget to maximize project efficiency.

Higher quality of the final product

By having a well-defined and tested workflow, it is possible to guarantee the quality of the final product, reducing the occurrence of bugs and problems in the software produced.

Advantages of using a workflow in **software projects.**

CONCLUSION

This e-book has reached its end. We hope this has helped you understand the importance of using an efficient workflow in software development.

Webera is committed to providing innovative and efficient solutions to manage projects, always concerned with helping teams work together more collaboratively and productively.

Therefore, we are happy to provide all the necessary support for your team to achieve success!

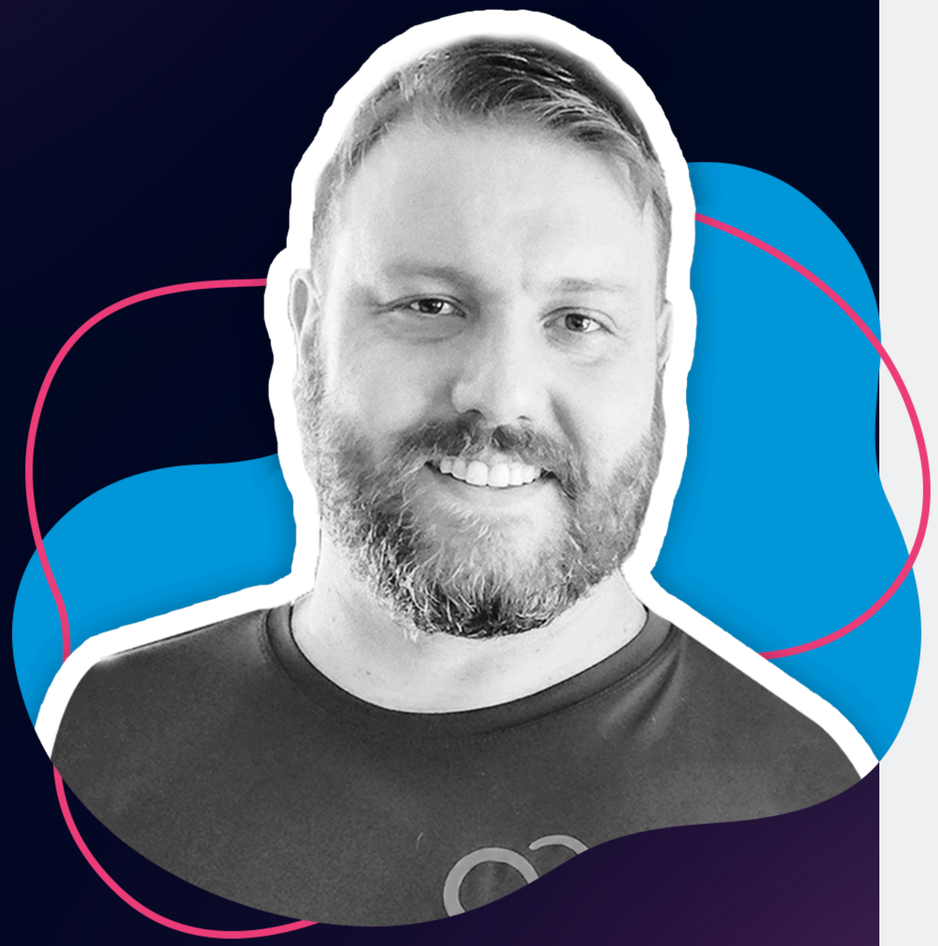
We appreciate your reading and will continue to help you automate processes, use monitoring tools, adopt security practices, and promote a culture of collaboration in your projects.

ABOUT WEBERA

Webera provides personalized services to clients ranging from entrepreneurs with new business ideas to billionaire companies and giants in the market.

Your goals, budget, and priorities will determine the most convenient service for you.

Contact us today to find out how we can help you achieve your goals.



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