

Accelerating Your Organization's Time to Value with Value Stream Management

Much of the focus over the past decade and a half has been on the implementation of Lean-Agile Ways of Working (WoW) within organizations. The intent and hope of these efforts is that by adopting these new ways of working that organizations would realize the benefits of improved value delivery resulting in better products and services that delight customers, engage employees, and increase profits.

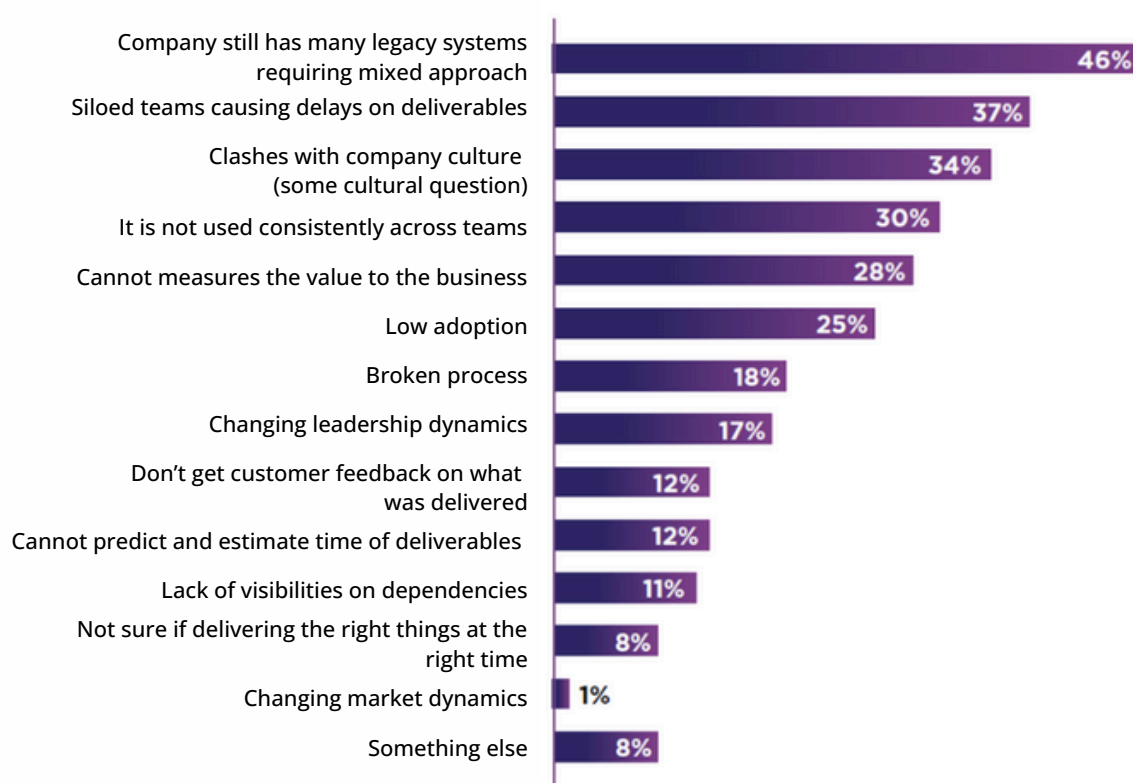
Digital AI's annual State of Agile report does an excellent job of capturing the current state of Agile and future trends. We will reference [The 17th State of Agile Report](#) and encourage you to review it in its entirety. The screenshot below lists the top reasons organizations choose to adopt Agile from page 12 of the report. You can see that the top two reasons are tied at 41%:

41% - Prioritize, deliver, and measure incremental customer and business value

41% - Accelerate time to Market



Let us zoom in on the issue of why organizations are unhappy with Agile adoption rates (pg. 16 of the report).



The report states that the top 3 reasons organizations are not satisfied with their adoption of Agile practices are:

46% - Company still has many legacy systems requiring mixed approach

37% - Siloed teams causing delays on deliverables

34% - Clashes with company culture

Adopting Value Stream Management within your organization could help address the first two items on this list by highlighting and addressing the delays caused by legacy systems and siloed teams.

Let us first start by defining what Value Stream Management is so that we understand the value it can provide an organization regardless of what flavor of Agile they have adopted.

Below is the definition that [FlowBuddy](#), an AI agent available on the Value Stream Management Consortium's site:

"Value Stream Management (VSM) is a way of working that encompasses a number of practices and techniques to organize, map, measure, manage, improve, govern, and accelerate the flow of measurable valuable outcomes to the customer. It makes work visible and surfaces insights into where delays, waste, and non-value-adding work can be removed to improve customer experience. VSM starts with identifying the value streams, the people involved, and the steps in each value stream."

FlowBuddy goes on to state ...

"It recognizes that most organizations will have many interconnected value streams with dependencies on one another. VSM is supported by technology in the form of Value Stream Management Platforms (VSMPs), which simplify building and managing CI/CD pipelines and DevOps toolchains, thus maximizing value by providing visibility, traceability, and observability into the flow of work."

Value Stream Management is different but related to Value Stream Mapping. Let us look at the differences between the two.

Value Stream Mapping (VSM) focuses on visualizing and documenting all the steps involved in delivering value to the customer, highlighting areas for improvement. It is primarily a tool for understanding and documenting processes.

Value Stream Management (VSM), on the other hand, is a broader practice that aims to optimize the entire flow of value through an organization. It involves managing, measuring, and improving processes using technology and data-driven insights to continuously enhance value delivery.

While Value Stream Mapping is a crucial part of Value Stream Management, the latter includes additional practices and tools for ongoing improvement and optimization.

Moving ahead, we are going to explore the Value Stream Consortium's implementation roadmap (seen below) to understand why Value Stream Management is an essential tool to add to your organization's continuous improvement toolkit and to show you how to implement it.



Start from Where You Are

We are all familiar with the Chinese proverb, *“A journey of a thousand miles begins with a single step.”* Your organization’s first step on the journey of adopting VSMgmt. is to start with where your organization is today. Hopefully, it won’t be a thousand-mile journey, but it will indeed be a trip.

VSMgmt. can be adopted from any starting point, as all businesses inherently consist of a network of value streams. Organizations, whether for profit or not, create products or services to serve customers. Enhancements or changes to these products or services must be designed, developed, and delivered for customers to derive value.

In our journey of implementing VSMgmt., we are going to use a fictitious company called InnoTech Solutions.



Here’s a little bit about InnoTech:

Industry: Technology and Software Development

Headquartered in: Sheboygan, Wisconsin

Background: InnoTech Solutions specializes in developing innovative software solutions for small to medium-sized businesses. They offer a range of products, including project management tools, customer relationship management (CRM) systems, and custom software development services.

Challenges:

- Rapid growth leading to scalability issues.
- Need for better alignment between development teams and business objectives.
- High customer demand for new features and quick turnaround times.

Goals:

- Improve efficiency and reduce waste in their development processes.
- Enhance collaboration between cross-functional teams.
- Deliver high-quality products faster to meet customer expectations.

InnoTech Solution’s value stream network consists of 3 primary operational value streams: Project Management solutions, CRM solutions, and custom application development. The challenges that that InfoTech is attempting to address by implementing VSMgmt. are:

Identifying and Eliminating Waste: VSMgmt. helps organizations pinpoint waste and inefficiencies in their processes, which can slow down delivery and reduce value to customers.

Improving Flow and Throughput: By visualizing the flow of work, organizations can identify bottlenecks and constraints that hinder progress, allowing for targeted improvements.

Enhancing Customer Value: The ultimate goal of VSMgmt. is to align processes with customer needs, ensuring that the value delivered meets or exceeds customer expectations.

Fostering Collaboration Across Teams: VSMgmt. encourages breaking down silos between departments, promoting a more integrated approach to delivering value.

Measuring and Communicating Progress: Establishing clear metrics and baselines helps organizations track improvements and communicate successes or areas needing attention to stakeholders.

Assess

InnoTech’s next step is assess their current VSMgmt. state. The word “assess”, and “assessment” have negative connotations since people and organizations really don’t like to be assessed. Rather, they would like to discover what they are doing well and opportunities to improve. A discovery is a great way to understand where your organization stands from a VSMgmt. standpoint and allows you to establish a baseline that your organization can use to measure maturity over time.

We can leverage the assessment tool that our good friends at the VSM Consortium created. Here is a [link](#) to their assessment available on the Comparative Agility website.



VSM Consortium’s assessment consists of 39 questions across 10 dimensions:

- Starting Point
- Vision
- Leadership
- Identification
- Organization
- Mapping
- Connection
- Inspection
- Adaptation
- Next Steps

Using a scale from 1 to 5, you rate how well your organization is achieving each of the 39 questions. The higher the score, the better your organization is doing from a VSMgmt. perspective. Lower scores become opportunities to improve.

The portfolio team at InnoTech Solutions just completed the assessment for their organization to establish a baseline of their VSMgmt. maturity. Let’s take a look at the results below.

INNOTECH SOLUTIONS VSMGMT BASELINE



The radar chart shown is broken out by the 10 dimensions of the assessment and was calculated by taking the average score for each of the questions that make up the dimension. This is a coarse-grained view of the results since it is at the dimension level as opposed to the individual question level. This was done to simplify the example to show areas of improvement.

We can see from the radar chart that InnoTech is doing well in the Mapping dimension, denoted with a **green** dot, since it is baselined at a 4. However, they have opportunities to improve in the areas of Inspection and Leadership, denoted by **red** dots, since these are the two areas with the lowest scores.

Vision

Leaders at InnoTech recognize the value of implementing VSMgmt. They understand that introducing any change effort within an organization requires clear alignment on the purpose of the change. Additionally, securing buy-in from team members is essential to ensure their active participation in the process, rather than having the change imposed on them. To get alignment, there needs to be clarity on the reason for the change and how that change will be measured over time.

InnoTech’s portfolio leadership team and stakeholders met to create a vision statement for the implementation of VSMgmt and a set of strategic Objectives and Key Results (OKRs) to measure the outcomes of the implementation.

Vision Statement for the Change :

“Empowering our team to deliver innovative, high-quality software solutions through seamless collaboration and continuous improvement, ensuring exceptional value for our customers.”

Objectives and Key Results (OKRs) for the Change

Below are a set of strategic OKRs to help measure the progress of VSMgmt implementation and the value it provides. The OKRs are strategic in nature, since they will span multiple quarters to complete. The team used an AI agent to create the draft OKRs and they will refine them to make them more relevant to InnoTech and to break them down into tactical OKRs for each quarter.

Objective: Identify and Eliminate Waste

Key Results:

- Conduct a comprehensive value stream mapping exercise for all three operational value streams within the next quarter.
- Identify and eliminate at least 10 major sources of waste across all value streams within six months.
- Achieve a 25% reduction in non-value-added activities by the end of the year.

Objective: Improve Flow & Throughput

Key Results:

- Implement a visual management system to track work progress and identify bottlenecks within the next three months.
- Increase the throughput of project management solutions by 20% within six months.
- Reduce lead time for CRM solutions by 30% over the next year.

Objective: Enhance Customer Value

Key Results:

- Conduct quarterly customer feedback sessions to align product features with customer needs.
- Achieve a customer satisfaction score of 90% or higher for all product lines within the next year.
- Increase the adoption rate of new features by 40% through targeted customer engagement and training.

Objective: Foster Collaboration Across Teams

Key Results:

- Establish cross-functional teams for each value stream, with regular bi-weekly meetings to discuss progress and challenges.
- Implement an integrated communication platform to facilitate real-time collaboration, achieving a 30% reduction in project delays due to miscommunication.
- Launch a series of team-building activities and workshops, with at least 80% employee participation, to strengthen inter-departmental relationships.

Objective: Measure and Communicate Progress

Key Results:

- Develop and deploy a set of key performance indicators (KPIs) to track the effectiveness of value stream management within the next quarter.
- Publish monthly progress reports to all stakeholders, highlighting successes and areas for improvement.
- Achieve a 95% on-time delivery rate for all projects by the end of the year.

The next step in the VSMgmt roadmap is to identify the InnoTech's value streams. InnoTech believes that they have three operational value streams: Project Management solutions, CRM solutions and custom application development.

Regardless, the portfolio team, leadership and stakeholders decided to conduct a Value Stream Identification workshop to validate if the 3 known operational value streams are truly operational value streams and if there are others. Also, they want to identify what development value streams provide input into each operational value stream.

First let's look at some definitions. An [operational value stream](#) (or business value stream) is defined by the SAFe framework as:

"An Operational Value Stream (OVS) is the sequence of activities needed to deliver a product or service to a customer."

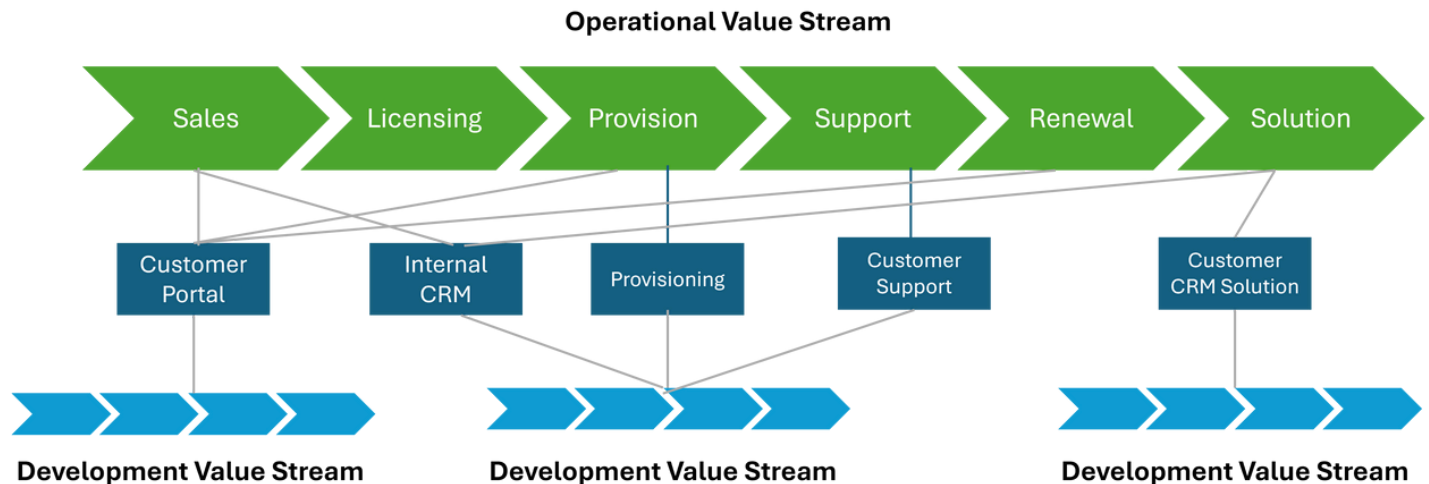
A [development value stream](#) is defined by the SAFe framework as:

"A Development Value Stream is the sequence of activities needed to convert a business hypothesis into a digitally enabled solution that delivers customer value."

Each operational value stream comprises multiple systems needed to generate value to their end users. Each of these systems requires a development stream to create and maintain.

Using InnoTech's CRM solution as an example, this operational value stream provides value to their external customers. However, there are multiple development value streams for the systems that support the creation and delivery of the customer CRM solution. These include a customer portal, an internal CRM to support sales, the CRM solution itself, provisioning the solution, customer support, customer renewals, etc.

The green chevrons denote the operational value stream of the customer CRM Solution. The light blue chevrons denote the development value streams that support the systems that enable the customer CRM Solution operational value stream. Some of the development value streams support multiple systems.



The portfolio team partners with their internal SAFe Practice Consultant to help organize and facilitate a Value Stream Identification (VSI) workshop. The SPC utilizes SAFe's VSI workshop to do. The workshop uses the following steps:

- Identify the Operational Value Streams
- Identify the Solutions the Operational Value Streams use or provide to Customers
- Identify the people who develop and support the Solutions
- Identify the Development Value Streams that build the Solutions
- Realize Development Value Streams into ARTs

Our next step is to identify all the skills needed to support each Development Value Stream. This way InnoTech has cross functional, dedicated, long-standing teams that focus on delivering value to support each system within the CRM solution operational value stream. Establishing dedicated teams for each development value stream reduces handoffs and dependencies between organizational silos and misalignment.

Let us focus our attention on the development value stream that supports the Customer Portal. InnoTech Solution's Customer Portal is designed to act as a self-service interface for customers to interact with a company's services and support. InnoTech's Customer Portal provides the following services:

- **Access to Information:** Customers can view their account details, order history, and service requests.
- **Support and Ticketing:** They can submit support tickets, track their status, and communicate with support teams.
- **Knowledge Base:** They can access FAQs, guides, and other resources to help solve common issues.
- **Community Forums:** They can engage with other customers and share experiences or solutions.
- **Personalized Services:** They can view personalized offers, recommendations, and updates based on their preferences and history.
- **Billing and Payments:** They can manage invoices, make payments, and view transaction history.

Developing and supporting a customer portal in a CRM solution requires collaboration across various organizational silos, each contributing specific skills.



Customer Portal Development Value Stream

Here's a breakdown of the key skills and the departments typically involved:

1. IT and Development

- Software Development: Proficiency in programming languages (e.g., JavaScript, Python, Java) and frameworks.
- Database Management: Skills in SQL, NoSQL, and database design.
- System Integration: Experience with APIs and integrating various systems.
- Cybersecurity: Knowledge of security protocols to protect customer data.

2. UX/UI Design

- User Experience (UX) Design: Understanding user needs and creating intuitive interfaces.
- User Interface (UI) Design: Skills in graphic design and familiarity with design tools (e.g., Adobe XD, Sketch).
- Accessibility: Ensuring the portal is accessible to all users, including those with disabilities.

3. Customer Support

- Technical Support: Ability to troubleshoot and resolve technical issues.
- Customer Service: Strong communication skills to assist customers effectively.
- Training and Documentation: Creating user guides and training materials.

4. Marketing and Sales

- Content Creation: Developing engaging content for the portal.
- Customer Engagement: Strategies to keep customers engaged and using the portal.
- Analytics: Analyzing user data to improve the portal's effectiveness.

5. Program Management

- Program Planning: Coordinating the development process and ensuring timelines are met.
- Resource Management: Allocating resources efficiently across teams.
- Risk Management: Identifying and mitigating potential risks.

6. Legal and Compliance

- Regulatory Knowledge: Understanding data protection laws and regulations.
- Compliance Monitoring: Ensuring the portal adheres to legal standards.

7. Quality Assurance

- Testing: Conducting thorough testing to identify and fix bugs.
- Performance Monitoring: Ensuring the portal runs smoothly and efficiently.

Each of these departments plays a crucial role in the successful development and ongoing support of a customer portal.

The challenge is to bring all this talent together into a teams that focus on delivering and supporting the Customer Portal to reduce handoffs and dependencies and is aligned to a common vision.

The Customer Portal leadership team determined they will need about 6 to 7 teams to support the current and planned work for the Portal. They defined a roster and determined who is currently focused on the portal and who will need to be added from other departments so that they have the necessary conversations with their leadership about onboarding the additional team members.

The Customer Portal leadership team determined that they will use the Scaled Agile Framework to build an Agile Release Train focused on developing and supporting the portal. The leadership team will follow the Scaled Agile roadmap to launch their Customer Portal ART and will need to determine what types of teams need to exist on the ART based on team topologies. Check out this [site](#) regarding the different team topologies as defined by Matthew Skelton and Manuel Pais.

Please keep in mind that aligning team members from various parts of an organization to establish an Agile Release Train is no small feat. It requires planning and diplomacy to build and launch the ART and it is recommended to treat this activity as you would any change effort within your organization so that leadership, stakeholders and those participating in the ART understand the reason why creating a dedicated team of teams aligned to a value stream is essential to optimize flow in a system. Additional ARTs can then be launched following the same steps so that all value streams have the dedicated talent to be successful.

Mapping

The next step in the Value Stream Management implementation roadmap is mapping each of identified value streams. Value Stream Mapping (VSM) is an activity used to identify the individual steps in a workflow and the delays between steps. It is a visual representation of the current state of a value stream, which is the series of activities required to deliver value to the customer. VSM helps create a shared understanding of the value stream and lays the foundation for improving flow.



The process of Value Stream Mapping involves the following steps:

- Identify the target value streams: Determine the specific series of value-creating activities that will be mapped.
- Map the current state: Visualize the current steps in the value stream and collect metrics to understand where delays occur. Metrics such as Active Time, Wait Time, and Percent Complete and Accurate are used to analyze the current state.
- Identify improvement opportunities: Identify areas where flow can be improved by addressing bottlenecks, reducing batch sizes, and ensuring faster feedback. This step requires knowledge of the eight flow properties.
- Design the future state: Based on the knowledge of the current state and its constraints, create a desired future state. Restructure existing processes to provide a faster and more reliable flow of value to the customer.

Value Stream Mapping is a valuable tool in Value Stream Management (VSM) as it helps identify areas for improvement and enables organizations to achieve a smoother and more efficient flow of value through the end-to-end solution delivery life cycle.

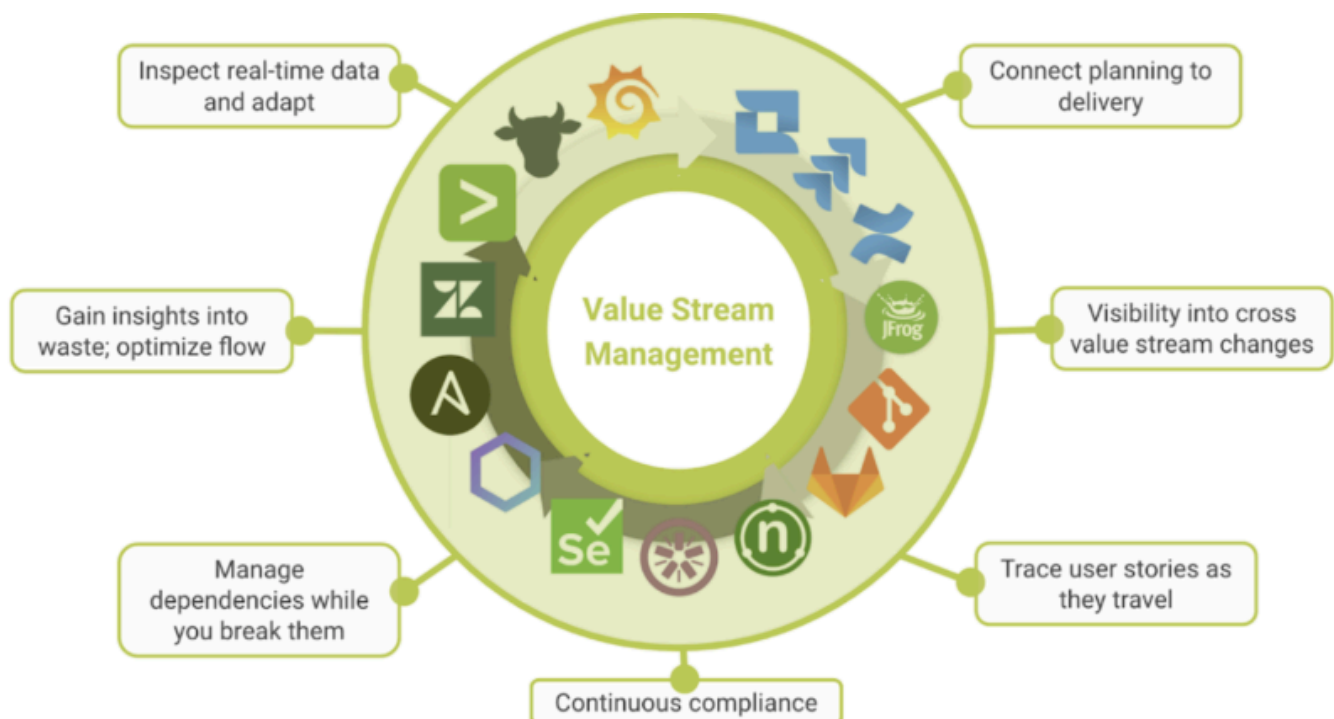
Connect

The Connect step in the Value Stream Management Implementation Roadmap highlights the importance of linking the DevOps toolchain to trace ideas from inception to value outcomes, measured by customer experience. This step helps teams visualize the entire value stream, making delays, rework, and waste visible. By integrating tools and data, organizations can gain insights for improvements and make informed decisions based on feedback. This connection is essential for continuous inspection and adaptation in digital value streams, enhancing overall efficiency and effectiveness in delivering value to customers.

Here's a brief overview of the connect activities from the book [The Lean-Agile Way](#):

- Define communication protocols: Establish clear guidelines for how team members exchange information, ensuring consistent and effective communication across all value stream levels.
- Integrate technology and tools: Combine various technology solutions and tools into a cohesive system that supports the value stream, enhancing the team's ability to work cohesively and efficiently.
- Automate data collection: Reduce manual effort, minimize errors, and provide a consistent and reliable data flow for analysis and decision-making.
- Enable real-time visibility: Set up systems that provide immediate insight into the value stream's performance, allowing for prompt identification of issues and opportunities for improvement.
- Establish feedback loops: Create feedback loops to support continuous learning and improvement, enabling the value stream to adapt and evolve based on insights gathered from the team's experiences and collected data.

The image below is from the VSM website showing an array of tools when integrated create the necessary visibility to manage, inspect and adapt your value stream network.



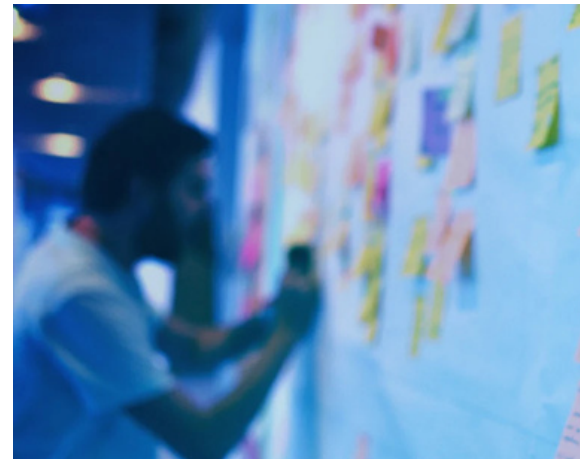
Tools like [Planview](#) and others have modules focused on managing your organization's value stream network. A tool that I have been learning more about is [Allstacks](#).

The Allstacks platform provides an affordable and powerful alternative to other integration and dashboarding tools by offering the following capabilities:

- **Software Delivery:** simplifies tracking software deliverables by offering a comprehensive, customized view across your organization.
- **Software Operations:** It provides a holistic view of the development life cycle, enabling data-driven decisions and performance improvements.
- **R&D Capitalization:** It automates the R&D cost capitalization process with consistent, defensible reports from multiple data sources.
- **Security:** The platform proactively enhances security practices to ensure the safety of your sensitive business data.

Inspect

The Inspect step in the Value Stream Management Implementation Roadmap involves continuously examining the value stream to find improvement areas. This includes gathering insights from products, processes, and team practices. Teams are encouraged to share their work openly and seek feedback, especially at the end of each sprint, to adapt to changing customer needs. The goal is to foster a culture of continuous improvement by regularly assessing whether the team is better off than before. This step highlights the importance of using data and metrics to guide inspections, ensuring that changes enhance customer satisfaction and overall value delivery.



The inspect phase focuses on analyzing and improving the performance of value streams through strategic actions. Key activities in this phase from the book *The Lean-Agile Way* include:

- **Define relevant metrics:** Identify essential performance indicators like lead time, cycle time, throughput, ongoing work, and defect rates.
- **Leverage automated data collection:** Use real-time data from DevOps tools to analyze performance and understand the true progress of work. For instance, while developers may mark work as 'Done' in a Kanban system, the completed work might remain in another team's release queue for months. DevOps tools provide a more accurate view by basing metrics on the end-to-end process.
- **Monitor performance:** Continuously monitor your value stream's performance using real-time data and insights from DevOps tools to prevent service disruptions. Teams should keep an eye on system attributes such as security, reliability, performance, and scalability.
- **Analyze the data:** Assess the collected data to evaluate process effectiveness and identify areas for improvement, including business outcomes for products and services.
- **Set experimental improvement goals:** Develop specific goals for experimental improvements to enhance your value stream performance, guided by detailed data analysis.

Lean and Agile ways of working provide the necessary feedback loops for continuous improvement. By connecting our tools and teams, we can use quantitative data to identify improvement opportunities, such as bottlenecks in the value stream or quality issues in our product. At the team level, the Iteration Retrospective helps identify opportunities for improvement. At the Agile Release Train level, the Inspect & Adapt event uses quantitative data from integrated tools to inform the Quantitative and Qualitative Measurement portion, addressing systemic improvement opportunities.

Adapt

The Adapt step in the Value Stream Management Implementation Roadmap highlights the need for continuous improvement using insights from the Inspect step. During this phase, organizations evaluate their progress and effectiveness over time. The focus is on adjusting processes and practices based on feedback and inspection results. Teams are encouraged to regularly assess their performance and determine if they are improving. The goal of the Adapt step is to enhance value delivery by promoting faster learning, increasing return on investment, reducing costs, and improving satisfaction for both customers and employees. This ongoing adaptation is essential for staying aligned with organizational goals and customer needs.



This phase involves seven key actions to evolve and refine the value stream outlined in the book *The Lean-Agile Way*:

- **Embrace continuous improvement:** Commit to ongoing enhancement, always seeking ways to improve the value stream.
- **Eliminate waste:** Identify and remove inefficiencies to streamline processes and maximize value.
- **Measure results and iterate:** Evaluate the outcomes of changes and make iterative adjustments to ensure continuous progress.
- **Fine-tune processes:** Adjust and optimize existing procedures for greater effectiveness and efficiency.
- **Automate workflows:** Implement automation to reduce manual effort and increase consistency and speed.
- **Share good practices:** Cultivate and apply successful patterns and techniques across the enterprise's value streams.
- **Foster a culture of adaptation:** Nurture an environment where flexibility and change are encouraged.

In conclusion, we encourage you to learn more about this Value Stream management since it is an essential tool in optimizing value delivery within any organization by improving visibility, flow, quality and customer value. Below are some recommended VSMgmt. reference materials:

- [Value Stream Consortium](#)
- [Flow Engineering](#)
- [The Lean-Agile Way](#)

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