

# Accelerate Your Software Deployment for Greater Agility and Reliability

Let Continuous Delivery  
transform your business

**Businesses that handle millions of transactions per day need a software development process that can scale to support growth of their business and technical objectives, quarter after quarter. However, many businesses cannot deploy new functionality with the speed, quality, or reliability needed to stay competitive, resulting in substantial revenue losses. Their software development lifecycle fails to streamline delays and minimize hand-offs between development teams, yielding suboptimal software that is too slow, expensive, and inflexible.**

To succeed in today's fast-changing world, businesses need a software development process that provides:

- **Agility:** The ability to build and release software quickly and iteratively to capture new opportunities is critical.
- **Visibility:** Management needs to be able to accurately assess which features teams are working on and what state they are in.
- **Efficiency:** Streamlined, repeatable processes are the only way software development teams can achieve more with less.
- **Automation:** Automation eliminates time-consuming manual processes that can introduce human error and delay releases.
- **Standards:** Standardized processes are the foundation for accelerating the software development lifecycle.
- **Consistent Delivery:** Reliable deployment, free of delays and cancellations, is a prerequisite for consistent delivery.
- **Assured Quality:** Automated testing prior to deployment to either release or fail a feature minimizes the risk and potential loss associated with quality.



**Grid Dynamics**

EXECUTIVE BRIEF

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# excellence through continuous delivery

During the early days of software development, building and releasing software was less time-consuming and risky since teams were relatively small and could use informal process involving ad hoc procedures and manual hand-offs. In contrast, today's modern software engineering organizations have many teams composed of hundreds (or more) developers, QAs, BSAs, PMs, release engineers, and other specialized individuals. Therefore, building and coordinating the release of software on schedule requires more formal and scalable processes.

Today's businesses need the reliability of an assembly line or pipeline where each stage of development is not only clearly defined but automated to minimize errors and delays. The pipeline gives structure to the overall development process, facilitating the handoff of code from one stage to the next and making software delivery as repeatable and reliable as any manufacturing line. It also ensures important project knowledge is integrated into processes rather than held by a few key individuals.

Many businesses today push code through this pipeline manually with each team directly handing off code to the next team. Unfortunately, delays can arise when processes are managed manually, since dependencies

are created on people. Every delay is compounded each time the development cycle repeats. When the pipeline is informal, even greater inefficiencies arise.

Continuous Delivery offers a proven solution for streamlining software design that enables rapid, reliable, and repeated delivery code enhancements at low risk and with minimal overhead (see Figure 1). Using a framework that automates processes from code design to deployment, software can be developed to high standards while reducing time-to-market. Continuous Delivery not only establishes consistent delivery of higher quality software with greater reliability, it does so at a lower overall cost.

Continuous Delivery achieves this through automated QA development processes that resemble a manufacturing assembly line (see Figure 2). This framework eliminates the need to manually manage the development flow and even integrates development, test, and support personnel to truly act as a single team so reliability is raised and software quality can be assured before it is released. In addition, the reliability and cost-effectiveness of Continuous Delivery allows companies to reliably update software as often as needed.

For example, a common issue businesses experience is learning about production delays only as code approaches its release date. With Continuous Delivery, transparency and visibility is introduced to the development process through checkpoints that provide

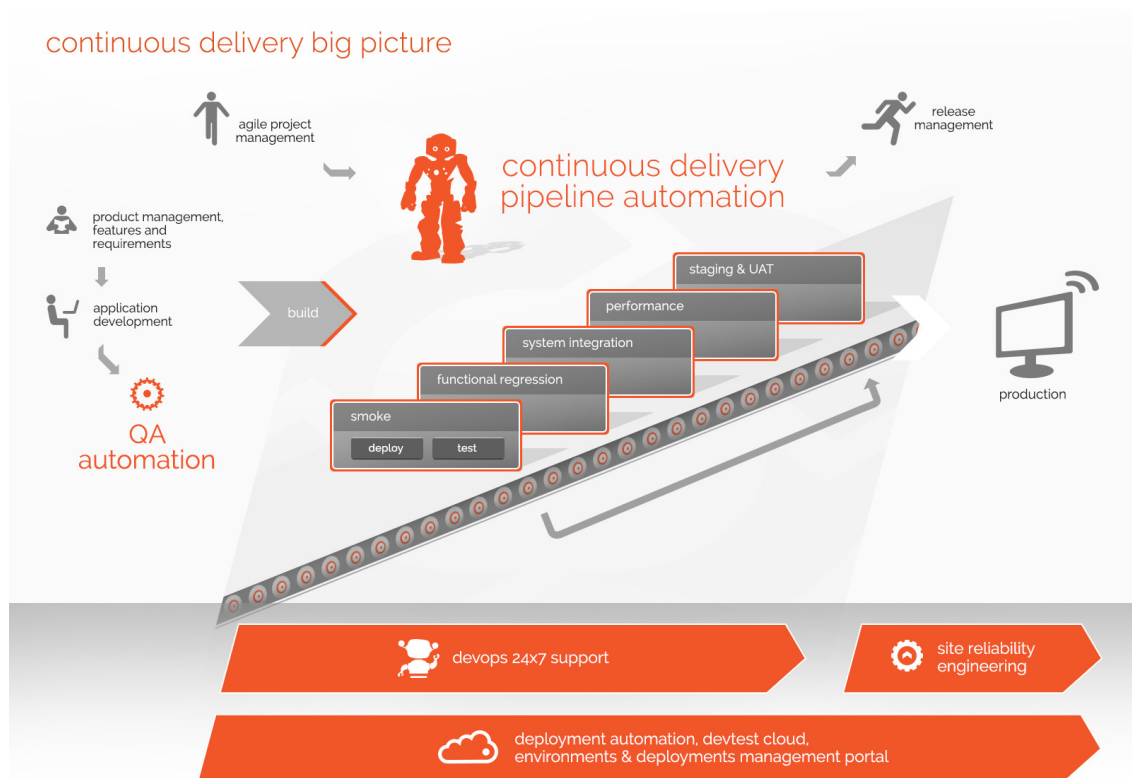


Figure 1: Continuous Delivery Big Picture

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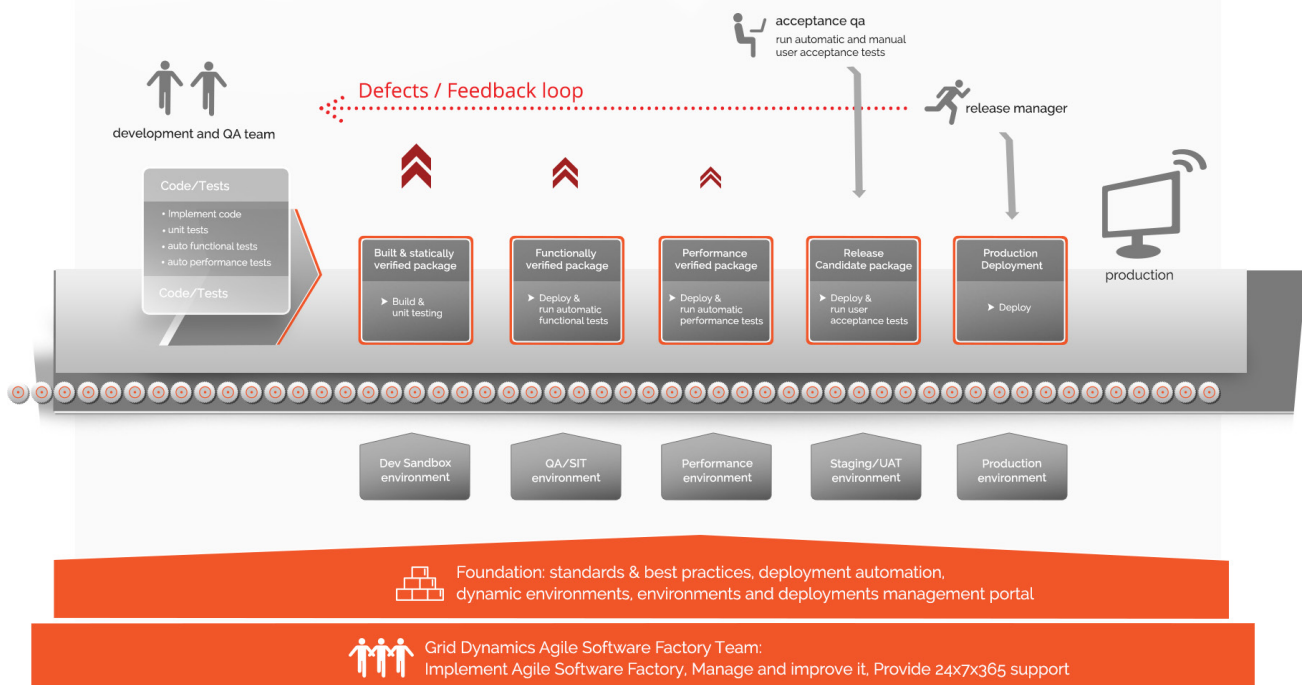


Figure 2: Agile Software Factory

you with notifications whether code is progressing on schedule so you can mitigate risks as they arise. These checkpoints can also help meet compliance requirements with relevant government and industry standards before code is released.

## understanding your deployment options

Continuous Delivery is an essential productivity tool for today's medium- to large-sized organizations. The challenges of implementing Continuous Delivery in-house, however, are significant. Many organizations do not have the resources to shift focus from current commitments to devote time and effort to establish the right Continuous Delivery processes and infrastructure from scratch. With the right partner, one who is intimately familiar with your business, software development, and continuous delivery, you can address these challenges to achieve six sigma levels of quality in your software development and release processes.

One major consideration in adopting Continuous Delivery is the appropriate engagement model. The model you choose determines how much work you have to do and the accountability of your partner. The most prominent models are:

- **Self-Implemented model:** An organization can purchase software to implement and manage their pipeline. The challenge with this approach is that you'll be on your own to figure out what you need and how to integrate the software into your development flow. You'll also be limited to the capabilities and flow imposed by the software, with little to no customization possible. Furthermore, there are no products on the market that offer a complete implementation, requiring your team to integrate several different frameworks and tool sets. As a result, this approach is the least flexible with the most limitations and the highest risk.
- **Consultant model:** Consultants can help you identify problems and areas of improvement within your current development pipeline and then implement their recommendations. However, it is typically your team who bears the risk and responsibility to implement these recommendations and deliver improvements. If there are changes in scope or timeline, your team is responsible to resolve these as well.

- Outsourced model: Outsourcing companies will provide the resources needed to implement a solution. However, optimizing the software development and release process requires individuals with specific skills and expertise. Outsourcing companies usually don't have staff with the specific skills to understand your business. You'll likely be assigned generic resources with neither a specialized background nor the required skill set to implement Continuous Delivery.
- Managed Services model: A managed services company provides a complete solution as a service. This is designed to provide value from the outset since the solution builds upon an existing integrated service (resource and technology) exists from the outset. It serves as a starting point to begin the Continuous Delivery journey and also to develop a long-term strategy based on your core business and technical requirements.

By partnering with a managed services company like Grid Dynamics, you can quickly implement Continuous Delivery and other technologies to help your business transform ideas into revenue faster. With a wide breadth of expertise and managed services like the innovative Agile Software Factory, we can provide you the most efficient — and cost-effective — solution. Grid Dynamics is directly accountable for your success, not just in implementing your development pipeline but in assuring that you achieve ongoing results.

Continuous Delivery enables you to scale your business moving forward with less complexity and cost. You'll be able to implement more functionality faster, with less risk, and with improved quality. By partnering with Grid Dynamics, you'll experience greater business agility through faster delivery of functionality using a proven release process and infrastructure, enabling your business to continuously evolve its software to meet changing market, customer, and business needs.

Continuous Delivery is just one of the many solutions and services Grid Dynamics offers. To learn more about how we can help accelerate your business, contact us at [sales@griddynamics.com](mailto:sales@griddynamics.com).

## about Grid Dynamics

Grid Dynamics is a leading provider of open, scalable, next-generation commerce technology solutions for Tier 1 retail. With in-depth expertise in commerce technologies, wide involvement in the open source community and a modern, global workforce, Grid Dynamics helps great companies gain a sustainable business advantage by implementing and managing solutions in the areas of omnichannel platforms, product search, and continuous delivery. To learn more about Grid Dynamics, find us at [www.griddynamics.com](http://www.griddynamics.com) or by following us on Twitter [@GridDynamics](https://twitter.com/GridDynamics).



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