



# DIY vs Buy Integrated Infrastructure

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A Comprehensive Analysis for  
Strategic Decision-Making

# Executive Summary

Organizations looking to optimize efficiency, cut costs, and stay competitive face a key decision: should they build their IT infrastructure from scratch or invest in a comprehensive solution like Scale Computing?

This white paper is designed to help executives, IT leaders, and decision-makers navigate the critical choice between building or buying an IT infrastructure platform. By comparing the complexities and benefits of DIY infrastructure versus a pre-built solution, organizations can make informed decisions that support sustainable growth and competitive advantage.

## Introduction

A solid IT infrastructure isn't just a backbone—it powers operational efficiency, fosters innovation, and drives growth. From enabling seamless communication and data management to supporting complex business processes, the role of IT infrastructure cannot be overstated. As organizations strive for agility, efficiency, and competitiveness, deciding whether to build or buy emerges as a pivotal strategic choice.

Effective IT infrastructure enhances operational efficiency, fosters innovation, and enables business growth. It supports critical functions, from data storage and security to seamless communication across global networks.

The evolution of technology has transformed how organizations operate, compelling them to adopt sophisticated IT solutions to meet growing demands. Organizations once predominantly built and integrated their IT infrastructure platform in-house to maintain control, customize solutions to specific needs, and ensure alignment with organizational objectives. This approach provided autonomy but often required substantial investments in expertise, time, and resources.

Conversely, the emergence of scalable, off-the-shelf solutions offered by external vendors, like Scale Computing, has presented compelling alternatives. Buying a pre-built IT infrastructure platform promises faster deployment, reduced upfront costs, and access to specialized expertise.

The build versus buy dilemma encapsulates the strategic decision-making process organizations face when determining the most suitable approach to acquiring or developing IT infrastructure. Each option offers distinct advantages and trade-offs, influencing cost, control, scalability, and agility. While DIY allows for tailored solutions and greater control over technology assets, buying a pre-integrated platform offers speed, cost-efficiency, and access to external expertise.

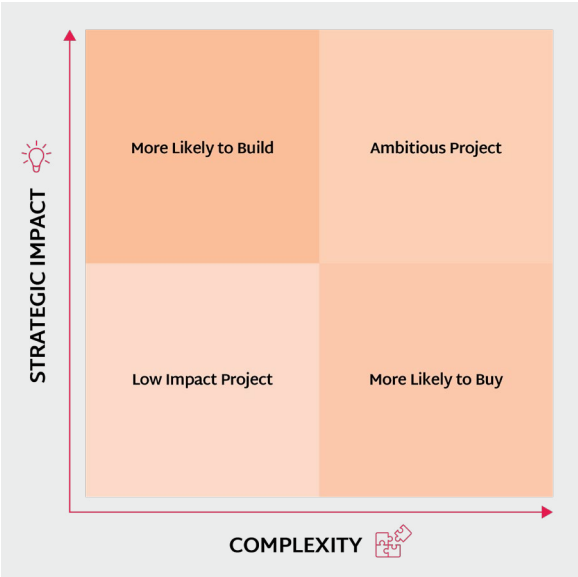
# Defining the Options

Custom building and integrating your IT infrastructure platform involves developing customizations from the ground up, leveraging in-house expertise or external contractors to design and implement solutions that fit your organization's needs. This approach offers unparalleled flexibility and control over hardware configurations, software integrations, and scalability, allowing organizations to align technology investments precisely with strategic objectives. However, this requires substantial upfront investment in resources, time for development and testing, and ongoing maintenance costs.

In contrast, buying a ready-made, market-tested solution gets you up and running faster, reducing initial investment and operational risks associated with development. It provides access to managed updates, services, and support expertise, enabling organizations to focus on core competencies while leveraging economies of scale and industry best practices, thereby reducing operational risks.

When evaluating solutions, deciding between custom building and integrating in-house or buying externally hinges on various factors, particularly scale and complexity. The decision-making process is nuanced: for initiatives where the software's potential impact is substantial and aligns with existing expertise and resources, building and integrating in-house often becomes an attractive option.

Conversely, purchasing can offer a more efficient and effective solution when faced with complex projects requiring specialized skills or when the platform addresses specific needs with moderate impact. Balancing these considerations ensures that organizations can strategically align their technology investments with their operational goals and capabilities.



“Software is risky to develop. Software projects fail with regularity. Software implementation risks include budget and deadline overruns. Bugs that can derail a project tend to be abundant. But, project management risks arise from all software form factors, including outsourced software development. Software deployment and data integration, user migration, and onboarding all present potential stumbling blocks.”

- Gartner, Decision Point for the Build vs. Buy Software Sourcing Decision

# Defining Your Needs: Factors to Consider

Organizations must carefully assess various factors to align their choice with strategic objectives, operational needs, and long-term sustainability when evaluating the decision to custom build and integrate their IT infrastructure platform from scratch or purchase a ready-made solution such as Scale Computing Platform. Let's take a closer look at what you need to consider.

## Cost Analysis

**Initial Investment.** DIY involves significant upfront costs regarding development resources, expertise, and infrastructure setup. Conversely, buying pre-configured SC//Platform typically typically costs less upfront and gets you going faster, but may vary based on an organization's specific needs and service packages. With SC//Platform, you eliminate costs from your application infrastructure every step of the way, including purchase, deployment, management, and maintenance.

**Ongoing Maintenance and Support.** Beyond initial costs, ongoing maintenance and support expenses differ between building and buying. With DIY, long-term maintenance costs can add up quickly, whereas buying often includes vendor-provided support services as part of contractual agreements. This can provide reassurance and peace of mind to organizations. SC//Platform allows organizations to maximize application uptime, use compute resources more efficiently, and drastically improve IT team productivity.

“A completely customized solution is not always a silver bullet. Businesses that pursue the 'build' route face a generally higher upfront price tag and longer ramp-up times. They also may need to take on the long-term commitment of employing a dedicated team to support the new product.”

(source) - [Forbes](#)

## Time to Market

**Development and Implementation Timelines.** Custom building and integrating can take months, maybe even years, to fully design, develop, test, and deploy your infrastructure. In contrast, SC//Platform reduces deployment by 90% in most cases, leveraging the zero-touch provisioning available in [Scale Computing Fleet Manager](#).

**Impact on Business Operations.** The choice between build and buy directly impacts business operations. Building may disrupt ongoing operations during development phases while buying can mitigate operational disruptions with faster implementation timelines.

## Skilled Staff Requirements

One of the most significant challenges of custom building and maintaining IT infrastructure platforms is finding and keeping highly skilled staff. Professionals with deep expertise in platform design, integration, and management are rare and in high demand. As a result, they command high salaries, making them an expensive resource for any organization. Additionally, the scarcity of such talent creates a competitive job market where retaining these experts becomes a constant challenge. And, once you find these experts, retaining them can be difficult as competitors might poach them, leading to potential disruptions and knowledge gaps.

“ You must focus on IT outcomes. This is not about staffing with ‘how to’ skills. Rather, it is about sourcing the right approach. This might mean, for example, using intelligent infrastructure that features automation, AI/ML, digital twins or low-code/no-code platforms, or fulfilling IT needs by using more ‘as a service’ functions. It is fundamentally about evolving from cost drivers to value drivers with holistic IT outcomes, as opposed to using myopic ‘point solutions.’ You need to think across your IT organization and across domains to deliver the right outcomes.”

- Gartner, [Maverick Research: Stop Investing in IT Skills](#)

## Customization vs Standardization

**Level of Customization Required.** Building allows for the ultimate level of customization—you get to call the shots on every detail.

In contrast, Scale Computing has done 15 years of development work so you don't have to. SC//Platform is an all-in-one software and hardware platform for deploying and running applications. It replaces complex, costly, and difficult-to-manage solutions with a single, easy-to-use platform that can be deployed almost anywhere. The fully integrated compute, storage, virtualization and disaster recovery environment simultaneously runs legacy and modern applications on the same infrastructure.

**Compatibility with Existing Systems.** Both DIY and buy options should consider compatibility with existing IT infrastructures. Building ensures seamless integration with current systems but demands careful planning to avoid compatibility issues.

Buying generally requires evaluating vendor compatibility with existing IT ecosystems. Scale Computing HyperCore orchestration includes our REST APIs, cloud-init support, and Ansible collection, which play a crucial role in enhancing the functionality and manageability of SC//Platform, providing customization, extensibility, and integration with third-party tools.

## Control and Flexibility

**Control over Infrastructure and Data.** Building and integrating provides maximum control over infrastructure design, data management policies, and security protocols. Scale Computing does not grant root or privileged access to end-users or other outside representatives but adheres to strict SLAs.

**Flexibility to Adapt to Changing Needs.** Building offers flexibility to adapt infrastructure as business needs evolve, accommodating technological advancements and organizational growth. SC//Platform is unmatched for managing and scaling application infrastructure across many sites under a common platform.

## Scalability

**Capacity to Scale Up or Down.** Scalability considerations are crucial for both custom build and buy decisions. When you build, you tailor scalability to meet your specific needs, aligning resource allocation with fluctuating business demands. Buying necessitates evaluating vendor scalability capabilities and contractual terms for scaling operations.

**Future Growth Considerations.** Anticipating future growth is essential. Building ensures infrastructure scalability aligned with long-term business strategies, whereas buying requires assessing vendor roadmaps and scalability provisions to support future expansion plans. Capacity and performance requirements and hardware specs will forever change. Legacy applications will remain mission-critical, while modern applications will require new architectures.

With SC//Platform, simply mix and match the old and the new on the same infrastructure for a future-proof environment. Add, remove, or replace nodes when needed with minimal downtime.

## Security and Compliance

**Data Security Requirements.** Whether you build or buy, both options must meet stringent data security standards and regulatory requirements. Building offers control over security protocols and data protection measures. Buying requires assessing vendor security certifications and compliance with industry regulations.

**Regulatory Compliance Needs.** Compliance considerations vary between build and buy decisions. Building allows organizations to customize compliance strategies, ensuring adherence to specific regulatory frameworks. Buying requires due diligence to ensure vendor compliance and risk mitigation strategies.

## Vendor Dependence

When you buy, you trust a vendor to be reliable and deliver on its promises. Evaluating vendor reliability and reputation is critical. Buying requires assessing vendor track records, customer reviews, and service-level commitments to mitigate risks associated with vendor reliability and support quality.

Each factor significantly shapes strategic decisions and operational outcomes, guiding organizations toward choices that best fit their unique needs and goals.

# Complexities of Building and IT Infrastructure Platform for Edge Environments

Managing and maintaining distributed edge infrastructure adds further complexity, requiring remote monitoring, automated management tools, and efficient troubleshooting capabilities. These challenges are compounded when an organization has multiple distributed locations.

Building and integrating IT infrastructure for edge environments presents additional unique challenges and complexities that differ significantly from traditional data center deployments. Edge infrastructure is characterized by its deployment in remote, often harsh environments, closer to where data is generated and consumed. This proximity brings several advantages but also introduces a set of specific hurdles that organizations must overcome when opting to custom-build and integrate their IT infrastructure platform.

## Additional Considerations

**Modular Design.** Edge solutions must be modular, allowing for easy upgrades and expansions as needs evolve. Modular designs also facilitate easier component replacement and reduce maintenance complexity.

**Resilience and Redundancy.** Resilience and redundancy ensure continuous operation despite environmental challenges or component failures. This includes redundant power supplies, failover mechanisms, and data redundancy.

**Local Data Processing.** Local data processing capabilities handle critical workloads and reduce latency. This is essential for applications that require real-time processing and decision-making at the edge.

**Automated Management.** Automated management tools and remote monitoring systems oversee edge infrastructure. Automation helps manage large-scale deployments efficiently and ensures prompt issue responses.

**Security Measures.** Integrate advanced security features, such as encryption, intrusion detection, and secure access controls, to protect edge deployments from cyber threats and unauthorized access.

## Decision-Making Framework

Making an informed decision between custom building and buying infrastructure solutions requires a structured approach with various cross-departmental stakeholders considering various factors impacting organizational objectives, operational efficiency, and long-term sustainability.

“Buying best-in-class SaaS products reduces time-to-market and the high costs of ownership, management, and support of custom software over time. It also lets us leverage the expertise of the marketplace. Building solutions that are available in the market also results in a high opportunity cost while resources are tied up and unable to work on more strategic initiatives.”

(source) - [Chick-Fil-A](#)



## 7-Question Framework

In navigating strategic decisions, a structured framework can provide clarity and direction. The following seven questions serve as pillars in evaluating options and making informed choices:

1. How essential is this to our core operations?
2. Is this solution a differentiator?
3. Will this integrate seamlessly?
4. Which option maintains simplicity?
5. What's the quickest path to implementation?
6. Do we possess the necessary expertise to develop this in-house?
7. What are the costs associated with custom building and integrating versus buying, including both deployment and maintenance?

## Evaluation Team

The stakeholders involved in the evaluation depend on the specific capabilities being assessed. Typically, cross-functional teams include representatives from the following groups:

- **Finance:** Ensures cost and budget alignment.
- **Product Managers:** Provide detailed input on tool requirements.
- **End users (or proxies):** Describe how they intend to use the tool.
- **Engineers:** Offer insights on integration and customization.
- **Developers:** Provide detailed input on development needs and timelines.
- **Infrastructure and IT Operations:** Responsible for deployment and support.
- **Back-office operations:** Manage administration of the tool.
- **Compliance and Security groups:** Ensure the tool meets organizational risk standards.

## SWOT Analysis

A SWOT analysis systematically evaluates the strengths, weaknesses, opportunities, and threats associated with building or buying SC//Platform.

| Aspect               | Build   | Buy SC//Platform  |
|----------------------|---|---|
| <b>Strengths</b>     | <ul style="list-style-type: none"> <li>• Customization to specific business needs</li> <li>• Complete control over infrastructure and data</li> <li>• Potential for higher long-term cost efficiency</li> </ul> | <ul style="list-style-type: none"> <li>• Lower initial investment</li> <li>• Faster deployment</li> <li>• Access to vendor expertise and support</li> <li>• Simplicity</li> <li>• Flexibility (Future-proof)</li> <li>• Security</li> <li>• Updates and upgrades</li> </ul> |
| <b>Weaknesses</b>    | <ul style="list-style-type: none"> <li>• Higher initial investment</li> <li>• Longer time to market</li> <li>• Requires internal expertise for development and maintenance</li> </ul>                           | <ul style="list-style-type: none"> <li>• No root access</li> </ul>  |
| <b>Opportunities</b> | <ul style="list-style-type: none"> <li>• Scalabilities tailored to future growth</li> <li>• Innovation through custom features</li> </ul>   | <ul style="list-style-type: none"> <li>• Integration with existing systems</li> <li>• Scalabilities for future growth</li> <li>• Cost savings through simplification</li> <li>• Ease of management</li> <li>• Stability and reliability</li> </ul>                          |
| <b>Threats</b>       | <ul style="list-style-type: none"> <li>• Risk of project delays and cost overruns</li> <li>• Technology obsolescence</li> </ul>   | <ul style="list-style-type: none"> <li>• Minimal impact on future product direction</li> </ul>  |

## Total Cost of Ownership (TCO)

When thinking about total cost of ownership (TCO), it's not just the initial price tag that matters. You have to look at all the direct and indirect costs over the lifecycle of your IT infrastructure

| Aspect                        | Build   | Buy SC//Platform   |   |
|-------------------------------|---|--|---|
| <b>Initial Setup</b>          | Initial setup of the infrastructure                     | Purchase of hardware, software licenses, installation, & configuration                         | Subscription fees, licensing costs, initial setup fees              |
| <b>Hardware</b>               | Physical servers, storage, and other hardware           | Purchase of servers, storage devices, networking equipment, backup solutions                   | Included  |
| <b>Software</b>               | Operating systems, applications, and other software     | Purchase of operating systems, applications, middleware, and other necessary software licenses | Included  |
| <b>Management/Maintenance</b> | Maintaining the infrastructure                          | Regular updates, patches, troubleshooting, bug fixes, and repairs                              | Included  |
| <b>Design</b>                 | Chosen design type, including redesign                  | Design and redesign time, outsourced or in-house   | Included  |
| <b>Deployment</b>             | Time to value   | Deployment time, once validated  | Reduced by 90% with SC//Fleet Manager Zero-Touch Provisioning       |
| <b>Support</b>                | Technical support and user support                      | Salaries of IT support staff, training costs, and third-party support contracts                | Included  |
| <b>Scalability</b>            | Scaling the infrastructure to meet growing demands      | Purchase of additional hardware, software licenses, and possible reconfiguration costs         | Pay-as-you-grow pricing, often scalable with flexible terms         |
| <b>Downtime</b>               | System downtime and lost productivity                   | Potential productivity loss, revenue loss, and possible reputational damage                    | SLA guarantees  |
| <b>Security</b>               | Securing the infrastructure                             | Purchase of security hardware/software, regular updates, monitoring, and incident response     | Included  |
| <b>Compliance</b>             | Meeting regulatory and industry standards               | Implementation of compliance controls, audits, and certifications                              | Often included in the service fee with built-in compliance features |
| <b>Training</b>               | Training IT staff and end-users                         | Training programs, certifications, and ongoing learning resources                              | Low/No-cost training programs, certifications, and SC//Academy      |
| <b>Upgrades</b>               | Upgrading the infrastructure to new technologies        | Purchase of new hardware, software, and potential reconfiguration costs                        | Included  |
| <b>Energy</b>                 | Power and cooling                                       | Electricity for running servers and cooling systems  |   |
| <b>Depreciation</b>           | Hardware depreciation                                   | Depreciation of purchased hardware over time   | N/A   |
| <b>Opportunity</b>            | Lost opportunities due to focusing on IT infrastructure | Potential diversion of resources from core business activities                                 | Potentially less as core activities remain the focus                |

# Comprehensive Testing: An Extra Step to Ensuring Custom Build Integration and Performance

It's crucial to establish a comprehensive lab environment to test component interactions throughout their lifecycle. This step is essential because your IT infrastructure environment is unique, often containing specific configurations, dependencies, and workloads that distinguish it from others. Consider the following:

**Workload Simulation.** Deploy typical workloads and applications in the lab environment to simulate real-world usage. This helps identify performance bottlenecks and ensures all components can handle the expected load.

**Interaction Testing.** Conduct thorough testing of all component interactions, including hardware compatibility, software integration, and network performance. Identify any conflicts or performance issues early on.

**Lifecycle Testing.** Implement a structured lifecycle testing plan. Regularly apply patches and updates in a safe testing environment before rolling them out in production. Monitor the effects and ensure no adverse impacts before applying them to the production environment.

**Patching and Updates.** Regular patches and updates are necessary to maintain security and performance. Testing these patches in a lab environment helps ensure they work as intended and do not introduce new problems.

**Break/Fix Scenarios.** Introduce potential failure scenarios and test your response strategies. Whether it's hardware failures, software crashes, or network disruptions, make sure your break/fix protocols are tested and refined based on these scenarios.

**Documentation.** The organization is responsible for maintaining detailed documentation of all tests conducted, issues identified, and solutions implemented in custom-built scenarios.

A proof of concept (POC) in a buy scenario can ensure you get the most out of your review test use cases, including installation, workload migration, and standard success criteria testing.

## Institutional Protection (IP) Enhances IT Infrastructure with Scale Computing Platform

The Institutional Protection (IP) case study explains how SC//Platform was deployed to overcome significant IT challenges, aligning technology with strategic business goals to enhance operational effectiveness and client service.

As a technology-driven company, maintaining a modern IT infrastructure is crucial to IP's service offerings and overall business strategy. [Read More >>](#)



# Scale Computing Platform

Scale Computing pioneered the architecture that led to a new class of computing infrastructure, [hyperconverged infrastructure](#) (HCI). The same patented technology in SC//Platform has been trusted to run businesses of all sizes around the globe for over 15 years.

We understand the critical decision-making process organizations undergo when evaluating whether to build or buy [SC//Platform](#). We aim to provide guidance and best practices to help businesses navigate this decision effectively, ensuring alignment with strategic objectives and long-term success.

## Making the DIY vs Buy Decision

When deciding between custom building and integrating their own infrastructure or purchasing SC//Platform, organizations should consider several factors to make an informed choice.

**Business Needs Assessment.** Conduct a thorough assessment of current and future business requirements, including scalability, performance expectations, and integration capabilities. This evaluation helps determine whether a custom-built solution or our pre-configured platform best aligns with your goals.

**Cost-Benefit Analysis.** Perform a comprehensive cost-benefit analysis considering both upfront investment and long-term total cost of ownership (TCO). Be sure to evaluate the financial implications for both DIY and buy. Scale Computing offers [transparent pricing](#) and a [TCO calculator](#) to assist in this evaluation.

**Risk Assessment and Security.** Identify and mitigate security risks associated with each option, including project timelines, resource constraints, and potential dependencies. Scale Computing provides [security by design](#), robust support, and SLAs to mitigate risks associated with SC//Platform, ensuring reliability and operational continuity.

## Best Practices for Implementation

Implementing IT infrastructure solutions involves careful planning and execution to maximize efficiency and minimize disruption:

**Detailed Project Planning.** Develop a detailed implementation plan that outlines project milestones, resource allocation, and contingency measures. Scale Computing offers implementation guides, [services](#), and [technical support](#) to streamline deployment and ensure seamless integration with existing IT environments.

**Training and Onboarding.** Scale Computing provides training programs and certifications to empower IT staff with the knowledge and skills to manage and maintain SC//Platform effectively.

**Scalability and Flexibility.** Prioritize solutions that offer scalability and flexibility to accommodate future growth and technological advancements. SC//Platform is unparalleled in scaling seamlessly, supporting dynamic business needs without compromising performance or reliability.

## Strategic Considerations for Long-Term Success

Achieving long-term success with IT infrastructure investments requires strategic foresight and proactive management:

**Alignment with Business Goals.** Your chosen solution should support your broader business objectives and future strategic initiatives. Scale Computing collaborates closely with businesses to understand their unique requirements and deliver tailored solutions that drive operational efficiency and innovation.

**Simplified Deployment.** Pre-built solutions come with easy-to-follow deployment guides and automated setup tools, ensuring quick and straightforward installation even by non-specialized personnel.

**Continuous Evaluation and Optimization.** Regularly evaluate the performance and effectiveness of IT infrastructure solutions to identify areas for optimization and improvement. Scale Computing provides ongoing support and [services](#), updates, and enhancements to ensure SC//Platform evolves in sync with industry trends and customer needs.

**Automated Management and Monitoring with Alops.** Scale Computing provides automated management and remote monitoring capabilities, simplifying the oversight and maintenance of distributed edge infrastructure.

**Security and Compliance.** Prioritize data security and regulatory compliance by selecting solutions that incorporate robust security measures and adhere to industry standards. Scale Computing provides [security by design](#) into SC//Platform, safeguarding sensitive information and ensuring compliance with regulatory requirements.

**Support and Services.** Support with some vendors can be difficult or non-existent. Scale Computing provides world-class, award-winning, 24/7 comprehensive support and services to ensure that any issues are promptly addressed, with access to expert assistance for troubleshooting, updates, and optimizations.

By following these guidelines and best practices, organizations can confidently navigate the build vs buy decision and implement an IT infrastructure platform effectively. We are committed to empowering businesses with scalable, reliable, and innovative solutions that drive growth and competitiveness in today's marketplace.

Curious about how Scale Computing can work for you? Take a [self-guided product tour](#) or [get in touch with us](#) today—we'd love to help you explore the possibilities.



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