Midagon Point of View

Point of View: SAP S/4HANA Version Upgrade – A Necessary Evil or Strategic Opportunity?

Introduction

SAP S/4HANA, the latest enterprise resource planning (ERP) system from SAP, has firmly established itself as the successor to SAP ECC, a previous generation of SAP's ERP software.

When comparing S/4HANA upgrades to ECC upgrades, the ECC upgrade is primarily a technical upgrade of the existing system, whereas S/4HANA is not just an ERP system but a continuously evolving digital platform. S/4HANA upgrades can be viewed as functional advancements, as they introduce continuous innovation and enhanced business capabilities. Regular version upgrades are essential for companies that want to stay competitive and agile.

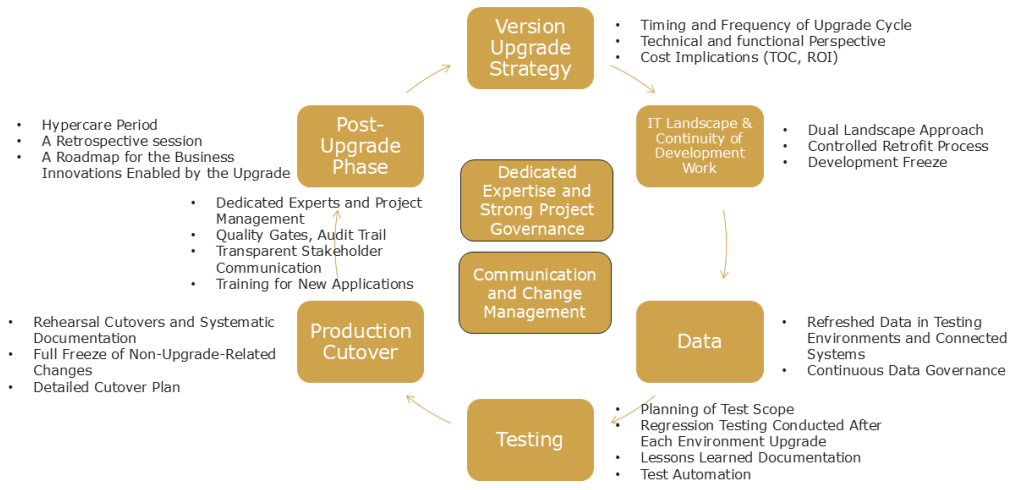
As a result, recurring and effective S/4HANA version upgrades are becoming an increasingly critical component of companies' IT and business strategies. An S/4HANA version upgrade is no longer merely a technical exercise.
It is a strategic initiative that aligns IT capabilities with business objectives.

What Are the Key Success Factors for an S/4HANA Version Upgrade?

S/4HANA is offered in On-Premise, Private Cloud (PCE), and Public Cloud editions, each with distinct release cycles. This Point of View focuses on On-Premise and Private Cloud upgrades, which follow similar processes, while Public Cloud upgrades occur several times per year and are fully managed by SAP. Upgrade timing should align with the business strategy and SAP's release cadence; in Private Cloud environments, annual upgrades are typically coordinated with the hosting provider or SAP in RISE scenarios.

The image below illustrates the key success factors for an S/4HANA upgrade presented in this Point of View.

Key Success Factors for an S/4HANA Version Upgrade



1. Strategic Significance

The upgrade strategy must be defined before the upgrade project begins, whether the upgrade is viewed primarily as a technical exercise or also as a functional one that also leverages the advancements delivered with the new version.

From a **technical perspective**, a version upgrade ensures the system stays under active SAP maintenance, including:

- Security patches and bug fixes
- Performance improvements
- Compatibility with the latest SAP and third-party components

S/4HANA upgrades bring also **functional improvements** via innovation releases, either during or after the upgrade:

- Improved Fiori User Experience (UX)
- Automation of processes
- Advanced analytics
- Integration with emerging technologies such as AI, ML, and IoT

Traditionally, system upgrades have been viewed primarily as necessary costs. While S/4HANA upgrades likewise require investment, including potential impacts on licensing and long-term system costs, they can unlock measurable business value. By positioning the upgrade as a **value-driven initiative** rather than a technical necessity, organisations can define a clear ROI (Return on Investment) and develop a business case that aligns investment decisions with strategic objectives.

2. IT Landscape and Continuity of Development Work

Whether in the Cloud or On-Premise, the continuity of development work must be carefully planned before starting the S/4HANA version upgrade.

Maintaining parallel development during upgrades often requires **a dual landscape**, allowing ongoing changes in the non-upgraded system while syncing them to the upgraded environment by controlled **retrofit process**. This setup is especially important in S/4HANA, where structural and functional shifts driven by the simplified data model and cloud alignment are more significant than in ECC, which had mostly incremental, backward-compatible upgrades.

The more **customised** a system is, the greater the effort and risk involved in reconciling custom developments during an upgrade. Especially in S/4HANA Cloud editions, customisations should be kept to a minimum by following the **SAP Clean Core** principle, where most system objects adhere to **SAP Best Practices** and standard extensibility frameworks. Maintaining a Clean Core ensures upgrades are more efficient, predictable, and require less preparation and downtime.

Also, the larger the **delta between the source and target versions** larger the technical debt, meaning more complex, costly, and disruptive upgrades:

- More functional and technical changes to manage
- More deprecated objects and accumulated updates
- Complexity of regression testing, retrofit, and transport management

A development freeze ensures system stability and prevents code conflicts during the upgrade. It typically begins after the Sandbox upgrade and before upgrading the first environment (typically Development) to avoid discrepancies between upgraded and non-upgraded systems. The freeze then gradually extends from QA to pre-production. While new developments are paused, critical changes may still be managed through controlled retrofit. Beyond a technical constraint, the development freeze is a key risk-management measure ensuring stability, data integrity, and consistent code synchronisation.

In case a full development freeze across the landscape can be enforced, then a dual landscape during an S/4HANA upgrade is not necessarily needed. This requires that the organisation can tolerate that new developments, transports, and projects are paused until the upgrade is complete.

Careful pre-planning and coordination of release plans and ongoing projects ensures uninterrupted business operations throughout the upgrade.

3. The Importance of Data

Refreshing data in testing environments before the upgrade improves testing reliability and prevents errors caused by outdated or incomplete data. The refresh should also include connected systems, ensuring that integration testing reflects real-world conditions. Refreshed production-like data also supports development and enables a realistic assessment of upgrade impacts.

As organisations transition to SAP S/4HANA Cloud editions, continuous **data cleansing** becomes critical for smoother upgrades and more efficient, automated testing. In a cloud environment with frequent, recurring updates, embedding **ongoing data governance** into regular business operations is essential and delivers lasting benefits.

4. Testing

Testing is one of the most critical activities in an S/4HANA version upgrade and remains the company's responsibility even in Cloud editions.

The focus is on **regression testing** to ensure existing processes and integrations remain intact, with lessons learned documented after each environment upgrade. Unlike ECC, where version upgrades typically involve limited change and minimal impact on custom developments, S/4HANA upgrades can affect interfaces and custom solutions, requiring broader testing and possible remediation. For organisations that continue to operate partly on SAP ECC, regression testing of integrations is critical to maintaining seamless business continuity.

In addition to **custom extensions, custom-built applications, and integrations**, testing should prioritise upgrade-relevant test cases to manage scope and costs:

- **Successor applications replacing deprecated ones**
- **Fiori Launchpad updates**
- **Critical end-to-end business processes**

The project team typically handles lower-environment testing, while UAT in pre-production validates end-to-end business processes and is tested by the business.

Investing in and continuously improving **test automation** shortens test cycles and ensures future upgrades are faster, more efficient, and cost-effective. As future upgrades are inevitable, whether in On-Premise or Cloud, test automation becomes one of the key enablers for making each subsequent upgrade more efficient, cost-effective, and faster to execute.

5. Production Cutover

A successful production cutover relies on well-tested cutovers in lower environments. Systematic documentation and **rehearsal cutovers** reduce business disruption and increase confidence in the final go-live. Each rehearsal cutover and testing cycle should capture **lessons learned, technical deltas**, and potential training needs for users or processes affected by the change.

A more standardised system reduces upgrade risk and enables a smoother cutover with **shorter downtime**, as fewer transports and manual adjustments are needed during the final upgrade window.

Before the production upgrade, a **full freeze** is enforced, focusing solely on cutover-related activities and preventing any new development, non-upgrade-related configuration changes, or change requests across the system landscape. Full freeze is a key risk management step to safeguard system integrity and business continuity during the upgrade.

A detailed **cutover plan** with clear tasks, responsibilities, and rollback procedures, combined with proactive stakeholder communication, ensures a controlled and predictable go-live.

6. Post-Upgrade Phase

A structured **Hypercare period** follows go-live, focused on stability, user support, and integration performance.

Lessons learned are documented to improve future upgrades. In parallel, IT and business teams assess new capabilities delivered by the upgrade and define a **roadmap for their deployment**.

7. Dedicated Expertise and Strong Project Governance

Many version upgrade challenges arise not from technology itself, but from a lack of ownership and dedicated expertise. Effective delivery requires **experienced technical and functional experts** familiar with both current and target releases, supported by strong **project management and governance**. Rigorous control of transports, quality gates, and change tracking ensures compliance, reduces risk, and maintains transparency throughout the transformation process.

8. Stakeholder Communication and Change Management

Stakeholder communication and change management form the human core of the upgrade.

Clear communication ensures that the organisation understands the purpose, impacts, and dependencies with ongoing development projects. **Transparent communication** and solid preparation reduce resistance to change, increase commitment, and strengthen organisational trust.

User training is essential for new applications introduced by the upgrade. Users should be prepared in advance and understand why the upgrade is happening and how it impacts their work.

Summary

An SAP S/4HANA version upgrade can be a catalyst for improvement rather than a necessary evil. It is far more than a technical necessity. It is a strategic initiative that, when properly and effectively executed, strengthens business performance, ensures operational continuity and compliance, and unlocks new innovations.

With thorough pre-planning, structured knowledge capture, automated testing and opting for more standardised processes, risks can be minimised and the S/4HANA upgrade is executed faster and more reliably. Treating the upgrade as a strategic project driven by skilled teams and dedicated resources turns it from a cost-driven exercise to greater efficiency, user satisfaction, and long-term business value.

Recommendations: How to Succeed and Learn for Future S/4HANA Upgrades

#	Recommendation	Key Actions / Considerations
1	**Treat the upgrade as strategic**	Align IT and business goals; leverage new functionalities; link to corporate strategy, compliance, and continuity.
2	**Ensure development continuity**	Use system refreshes, dual landscapes, controlled retrofit processes, and proactive integration management.
3	**Invest in test automation**	Implement and enhance automated testing before the upgrade; make it a core part of future upgrade cycles.
4	**Learn from the lower environments' upgrade**	Document rehearsal cutovers' technical deltas and testing insights per environment; feed them into production cutover planning.
5	**Run as a professional project**	Assign clear ownership; involve expert teams; ensure structured communication and user training.
6	**Conduct retrospectives**	After go-live, review what worked and what didn't; identify improvement areas for the next upgrade.
7	**Adopt a factory-style approach**	Standardize, automate, and repeat upgrade steps to ensure efficiency, predictability, and minimal disruption.

Remarks

This Point of View reflects Midagon's S/4HANA upgrade expertise. However, most of the delivery practices, risk management approach, and governance principles outlined here are equally applicable to other ERP programs, enabling us to support clients across both SAP and non-SAP ecosystems. Midagon is an objective advisor and partner: We are 100 % vendor and technology neutral – always acting in our clients' best interest.

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