SAP Change and Release Management: A Multi-track Approach to Continuous Delivery
Executive Summary

When change release strategies fail to meet business-side expectations, organizations can lose confidence in the “large project” approach and in the IT teams tasked to support it.

To provide smoother, faster change implementation, large organizations have been moving away from infrequent change deliveries in favor of a more agile, flexible ‘continuous delivery’ approach.
Many organizations are moving to a ‘multi-lane’ or ‘multi-track’ approach because it accommodates different priorities for different types of change. This lets you respond to business needs in the fastest way possible for any given type of change.

Expanding the available categories of change to four allows you to assign finer granularity to each lane, with different development, QA, review and approval policies for different types of change. Routine BAU, small requested changes and other such everyday changes are no longer mixed in with emergency fixes or with wide-impact major project modifications and new module implementations.

Four-lane strategies are virtually impossible to manage with manual or partially manual change control approaches. Full automation makes it possible to manage with full governance and policy enforcement, eliminating bottlenecks that can impede the managed flow of changes.

Rev-Trac SAP change control automation software can ease the burden of managing releases in an SAP change control environment – in particular through its process configuration flexibility, process enforcement and governance management aided by its high change control visibility. With flexible application of enforceable, documented processes, your business customers will quickly gain – or regain – full confidence in your change deliveries.
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Introduction

For years, large organizations delivered changes in large batches, accumulating business requests into large packages delivered once or twice a year. However, today’s more complex infrastructures underscore vulnerabilities inherent in the large-package approach.

All changes come with some risk if they fail to work as expected. Large changes carry greater risk, as they affect more systems and data streams.

Common Large-project Problems

Large-project challenges include:

- Close-by deadlines can induce careless development when the go-live date begins to carry more weight than the quality.
- Resources of longer-term projects can be diverted to shorter-term projects, disrupting work flows.
- Costs spiral upward as quality sinks.
- Consultants or developers from other teams added as last-minute “firemen” have steep learning curves.
- In volatile business environments, acceptable lead times must shrink.

When large change packages delivered once or twice a year fail to meet business-side expectations, long delivery periods can become barriers to competitiveness. Organizations can lose confidence in the “large-project” approach and in the IT teams tasked to support it.
Multi-lane SAP Change Delivery

Many large organizations have responded by using multi-lane change deliveries, an approach now rapidly becoming preferred. It provides needed functionality more quickly and, with effective automation, can make the entire change process more manageable.

Figure 1. A typical multi-lane approach.

<table>
<thead>
<tr>
<th>Emergency Lane</th>
<th>Support Lane</th>
<th>Release Lane</th>
<th>Projects Lane</th>
</tr>
</thead>
</table>
| ![Emergency Lane](Image)
| ![Support Lane](Image)
| ![Release Lane](Image)
| ![Projects Lane](Image)

Section 1: Barriers to Multi-lane Delivery

Analysts have been urging large companies to adopt continuous or multi-lane delivery strategies to IT infrastructures for increased efficiencies. Managers now largely agree that projects can be developed and delivered more efficiently in smaller, more frequent chunks.

Since companies recognize the benefits of automating complex processes, it’s not immediately obvious why many have put off transitioning to a multi-lane delivery method. In many cases, the key reason is lack of adequate automation.

When business-side users begin to doubt IT’s ability to deliver changes reliably, better automation applied to a multi-lane delivery can quickly restore confidence.
Complexity

Merging multiple lanes of change into production systems is unavoidably complex. With manual or only partially automated change control methods, maintaining control can be difficult. Failure of control leads to lost work due to overwrites, transports moving forward out of sequence, and other risks to stability.

Proper SAP change automation and enforcement, as Rev-Trac® provides, can allow you to meet shifting market requirements and opportunities much more adeptly. It will identify and eliminate errors before they disrupt productive systems. It can sustain the degree of governance and enforcement that multi-lane change delivery requires while accommodating existing processes.

Automation lets you stay nimble without sacrificing reliability, flexibility or system stability, even as your system grows in size and complexity.

Compliance

In highly regulated industries such as finance, pharmaceuticals and energy, compliance requirements add to process complexity. Reliability with compliance requires you to manage system changes and data flows on a 24x7 basis. It is difficult to remain compliant when data assets are created by multiple parallel development teams, then stored and managed on a myriad of platforms using numerous applications that often are not mutually compatible and may not even be under IT’s direct control.

Such problems often result from growth, as new business units are taken into the larger organization. Legacy applications can also present challenges to compliance.

A flexible, fully automated change control system can provide the governance needed, including enforced approvals and full documentation, to achieve full compliance on complex systems.
Section 2: The Value of Automated Multi-track Approaches

The multi-lane or multi-track approach used by many organizations assigns different priorities to different types of change. This lets you respond to business needs in the fastest way possible for any given change.

Expanding the available categories of change to four allows you to assign finer granularity to each lane, with different development, QA, review and approval policies for different types of change. Routine BAU, small requested changes and other such everyday changes are no longer mixed in with emergency fixes or with wide-impact major project modifications. The end result? All categories of change are delivered more smoothly, with fewer delays.

More Companies Adopting a Multi-lane Strategy

If you currently have a development process leading from DEV to QA and, finally to PRD, with an additional channel for projects, chances are you’re applying the standard N, N+1 architecture.

“Continual” or multi-lane delivery doubles the channels to four, ranged from emergency to large-project change packages. For information on one four-lane approach, see the free eBook available for download but, in brief:

- **Lane 1 – Emergency changes** – Highest priority, fastest track to QAS and PRD
- **Lane 2 – Support releases** – Regular support changes and minor user requests gathered for weekly or fortnightly delivery
- **Lane 3 – Continuous delivery** – The monthly or quarterly scheduled releases
- **Lane 4 – Major projects** – Major projects to bring new modules online, upgrade crucial systems, or deliver in-house projects such as business unit consolidations
Section 3: Rules of the Road - Rev-Trac as 24/7 Traffic Cop

Four lanes are inherently more complex than two. Additional lanes can make users less sure about how to classify a requested change. They may not understand why they shouldn’t attach an Emergency label to changes they’re eager to see. Or they may be afraid to check the “emergency” box despite urgent need, because “emergency” seems so dire. Someone with approval to start a project may not realize how many hours it will take and mistakenly mark it for continuous delivery rather than for the major project lane.

Clearly, there must be rules of the road – and they must be enforceable in order to confidently assign changes into the correct delivery lane. An IT team member familiar with your data flows and available resources will normally review user-suggested change classifications. This can be made part of your automated, enforced approval process.

Parallel development teams can create problems when changes are mutually incompatible or redundant. Conflicting changes slotted into different lanes, with different approval processes, can be difficult to detect.

The Key – Effective Traffic Management

Effective traffic management is crucial. The process in your emergency lane will be much shorter than that in your support or continuous delivery lanes. Where an emergency change might advance with a simple test, bigger changes – even small requested enhancements – often need far more testing. Each lane will have its own processes and governances for you to enforce.

Lane Assignment

Lane allocation and control begins with the Rev-Trac Change Request. Rev-Trac uses the Change Request for initial lane assignment and reassignments. In addition, Rev-Trac Requests can be used to turn multiple SAP transports...
into one unit of work, making a given request a “vehicle” for an entire business requirement. In addition, a single Change Request may become a “passenger” on a Parent Request containing all Change Requests relating to a release, a weekly support release or a quarterly ‘continuous delivery’ release, for example.

Such control provides a great deal of flexibility. You can enforce approvals before allowing changes to progress along a lane. Different rules can apply to different lanes but all rules can be enforced in Rev-Trac. Manual methods make it very difficult to follow the various approval processes, especially with large volumes of transports taking multiple routes to PRD.

**Enforcement**

Enforcement starts with the attachment of an SAP request. A pop up will appear to ask if you want to create a new Rev-Trac Request or if you want to bundle the transport with an existing transport. The Change Request includes the type of approval strategy and, from that point on, the transport can only move after getting the appropriate approvals. If you want to change lanes part way through, you simply change some of the fields - but that too must satisfy the appropriate rights and approvals. Once you’ve made the changes, Rev-Trac manages the changes down the new assigned track. These changes may be configured to drive additional approval statuses and drive additional notifications.

**Rev-Trac Safety**

Rev-Trac provides for three levels of protection and unmatched visibility. First Rev-Trac will warn you if a parallel development is about to take place. Moving into production, Rev-Trac will warn if you are at risk of overtaking another change. And finally, Rev-Trac warns you are about to overwrite another change. Rev-Trac’s warnings allow you to make informed decisions on whether to combine a transport to a different request or manage a transport independently; visibility that is really important when merging different deliveries into production. From an audit standpoint, whatever action is taken, Rev-Trac then logs the decision automatically.

**Flexibility**

It would be nice if one size could fit all but that’s not how competitive advantage works. Rev-Trac enforces YOUR rules for YOUR processes. And it simplifies management. You can manage one by one, in groups or by release. Flexible. The developer can actually work with confidence. On the audit side, customers tell us all the time that, before Rev-Trac, audits could take weeks during which IT people scurried around to trace processes. With Rev-Trac, audit support is typically reduced to hours as all change processes are completely documented and audit trails automatically produced.

With flexible application of enforceable, documented processes, your business customers will quickly gain – or regain – full confidence in your change deliveries.
Conclusion

Multiple lanes reflecting graduated change request and project priority can greatly enhance an organization’s ability to deliver changes smoothly and without interruption. There are two main keys to a successful multi-lane delivery strategy:

- **Automation** – Four-lane strategies are virtually impossible to manage with manual or partially manual change control approaches. Full automation makes it possible to manage with full governance and policy enforcement, eliminating bottlenecks that impede the managed flow of changes.

- **Flexibility** – Automation that requires you to change processes that already work well will disrupt far more than any claimed benefits can justify. Your automation tools must be flexible enough to accommodate your working processes and software, in order to realize immediate, or even middle-term, ROI that justifies the effort.

Rev-Trac, by Revelation Software Concepts, delivers full SAP change automation with policy enforcement and complete, audit-ready documentation. It has the flexibility required for a smooth implementation without disrupting existing processes. Competing software approaches can deliver degrees of automation or flexibility – but only Rev-Trac delivers both of the elements crucial to successful multi-lane SAP change control transitions.

If your company has not automated its change control approach, or if you’ve already had difficulty transitioning to a continuous delivery approach, we invite you to take a look at Rev-Trac, the advanced SAP change control and automation tool by Revelation Software Concepts.

Additional Resources:

- **Build Your Own “Super Highway” to Manage Continuous Delivery of SAP Changes**

- **Key Points for Senior SAP IT Management: Crafting a Fully Automated SAP Change Release Strategy**

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Rev-Trac Makes Multi-lane Deliveries Manageable

Rev-Trac features to help manage a multi-track SAP change release strategy:

- **Process configuration permits lane allocation with specified approvals**

- **Process and categorization enforce lane rules and restrictions**

- **Request cloning keeps parallel systems in sync**

- **Extended locking prevents overwrites and collisions at any granularity level**

- **Overtake and Overwrite Protection System (OOPS) prevents problems when lanes merge**

- **Parent / Child requests allow better management of related change requests and more accurate sequencing**

- **Bundling merges multiple related changes into a single transport for enhanced management and lane control allowing for reduced production migration window runtimes**
About the Author

As Vice President Business Development, Rick Porter is responsible for RSC’s sales and marketing strategy and for sales of RSC products and services. This includes researching and understanding the change control challenges faced by SAP IT teams and the broad range of solutions available, including how best to position RSC’s change control software products.

If you find this white paper helpful, you might wish to subscribe to the RSC SAP Change Control Blog where he regularly contributes.

Contact Us

For information on how Rev-Trac can help manage SAP software changes as outlined in this white paper, please contact us.

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