



Transforming Enterprise Communications Management

How Automation Drives Digital Transformation

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Introduction

Digital transformation is not new. For example, barcodes replaced price tags in the '70s. At first, the barcode had negligible impact. The cashier still rang up each item as before. In fact, the change frustrated many people as they could no longer read a price on an item.

But the barcode digitally transformed retail. By enabling the register to know the item instead of only the price, it enabled totally new workflows such as automatic inventory management and even automated reordering. Barcodes enabled deeper understanding of purchasing patterns by analyzing the contents of a cart. Innovations as a result of the barcode continue, including self-checkout kiosks and targeted coupons. Digitization is what made it possible.

Nearly every major enterprise communications vendor touts digital transformation as a benefit. These claims are reasonable. Unified communications and customer engagement solutions enable a variety of digital processes. The problem is that the very same tools that fuel digital transformation are often subject to manual administrative processes.

The market for digital technologies that enable digital transformation is growing exponentially. IDC predicts that by 2022, 80 percent of revenue growth will depend on digital operations and offerings.

Where Does the Time Go?

Throughout the modern enterprise, information technology (IT) has revolutionized the way work gets done. IT delivers increases in productivity and automation, and it delivers powerful insights into mission-critical processes and workflow — unless you happen to be in IT itself.

IT staff are often inversely affected by each technological upgrade the enterprise implements. They shoulder the burden associated with making other people and departments more productive. The past 50 years of IT has been filled with paper jams, “sneaker” nets, viruses, and other manually intensive IT burdens.

Despite the revolution in enterprise productivity, administrative IT roles remain manually intensive. In some cases, these roles are even more complex and more manual than they used to be.

Beyond the work associated with each system, there's a multiplier effect. Each new IT solution (hardware, software, mobile devices, etc.) connects to an increasing number of other resources. Effectively, each new application is like a new whorl in a fingerprint. And each unique characteristic of the job makes it more difficult to hire experienced administrators.



The problem is amplified in enterprise communication systems as they tend to lag behind other IT systems in terms of operations, diagnostics, and automation, at least natively. Third-party tools can fill the gap, especially in multi-vendor environments.

Digital Transformation Begins with Digitization

Today, there's a lot of talk about digital transformation, but not necessarily about how to accomplish it. Despite the ads, digital transformation is not something that can be easily purchased.

The digital part is easy. So much of what we need, consume, and create is now accessed through our computers and smartphones. It's the transformation part that's hard. Consider the earlier barcode example: The revolution didn't come from scanning codes instead of prices, but from using sales data to estimate inventory, and in some cases even automatically replenishing inventory. Barcodes initiated a transformational journey that continues today.

The same logic applies to IT administration: Cumbersome manual processes should be transformed into

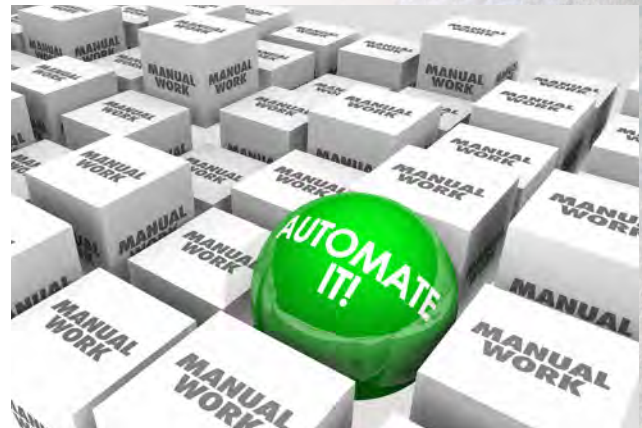
automated, integrated workflows. The result is increased agility and faster responses to dynamic conditions.

The Case for Automation

A few decades ago, the most powerful tool in PBX administration was the punch-down tool. Most moves, adds, or changes (MACs) required a technician to move wires and re-punch them with a punch-down tool.

Today, software does all this. Instead of punching wires, administrators punch keys on a keyboard. While some IT

administration processes have automated, such as automated account creation via Identity Managers, enterprise communications remain largely manual and can take days to process.



Many communication system vendors offer "single pane of glass" features, but most are still inherently manual processes. It's even more challenging in multi-vendor environments due to totally different approaches, myriad certifications, and the challenges associated with integration and synchronization.

This problem is not limited to the older systems. Many of the newest, state-of-the-art solutions for communications, collaboration, and contact centers remain in-

herently manual and oblivious of other systems. Current UC, contact center, and collaboration solutions provide exceptional end-user experiences. However, they aren't necessarily collaborative in terms of administration.

Despite the best of intentions, enterprise organizations require multiple systems to solve their unique needs. The operational capability that got us here is not the transformational capability we need for tomorrow.

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Time Is Money

MACs are not the problem — it's the time and effort to complete them that are the enemy. Most enterprises find it takes on average about 30 minutes or \$50-\$75 to complete a MAC request (which may involve several tasks), with an SLA of 2-3 days to resolve the request. Those dollar amounts add up quickly for large enterprises with thousands of MAC requests per month.



It gets worse when the MACs involve multiple systems and thus multiple skills from an administrator.

The solution is to automate communications management workflows. Most MAC transactions can be automated by leveraging existing interfaces to related systems.

Follow the Work

MAC transactions are not created in a vacuum — they are part of a business process such as onboarding a new employee or offboarding a terminated employee. These business events trigger workflows composed of multiple tasks. Some of those IT-related tasks are already automated, such as account creation in Active Directory, email, and other business applications. But for some reason, automation stops when it comes to communications management, and that part of the workflow becomes a manual process.

Given the extensive interfaces available to connect to communication systems, there is no reason that the full business process, including creation and configuration of communication resources, should not be completely automated.

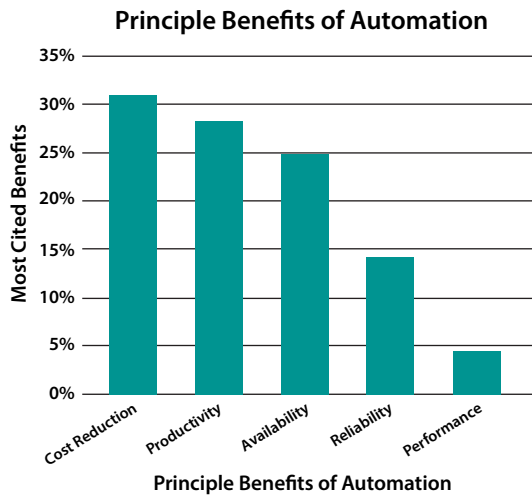
Starfish provides a technology platform that extends IT administration automation to enterprise communication systems. The platform includes a powerful workflow and synchronization engine, plus connectors to a wide variety of IT and communication systems.

Enterprise Communications Management

Automation Drives Digital Transformation

With Starfish technology, enterprises can streamline and automate end-to-end business processes and drive digital transformation in several ways:

- ✦ **Process streamlining and optimization:** A fully integrated and adaptive workflow engine allows enterprises to customize automated processes to fit their unique needs.
- ✦ **Improved overall IT operational efficiency:** Automation reduces risks and inconsistencies associated with human error. Automation can mean instant processing and reduce overall processing times.
- ✦ **Increased employee productivity and business agility:** Communication resources are managed dramatically faster, with substantially reduced administration effort. This results in improved business communication capability and faster reaction to business conditions.



Source: HelpSystems.com, 5 Benefits of Automation. Survey responses to “What do you see as the most important benefits of an automated or unattended computer center?”

Automation is more accessible than most enterprises realize. It’s a sad irony that automation is often put off because the teams are too busy to deal with problem. If the team is too busy, automation should be a priority.

Automation is critical to increasing:

- ✦ Staff efficiency
- ✦ Consistency
- ✦ Completeness of documentation and reporting
- ✦ Resource utilization
- ✦ Responsiveness
- ✦ Capabilities of less-senior staff

“Automation is one of the most critical steps an IT organization can take with regards to enterprise communications.”

– Dave Michels, Principal, TalkingPointz

But the most significant benefit of automation is digitally transforming administration workflows and allowing IT resources to benefit from software,

just as many IT systems benefit IT customers. Dave Michels, Principal Analyst at TalkingPointz, believes, “Automation is one of the most critical steps an IT organization can take with regards to enterprise communications. The adoption of automation platforms is fairly obvious; what’s missing is awareness. Most IT organizations are unaware that these platforms exist. Those that are aware, automate.”

Where to Start?

The Starfish technology platform automates millions of MAC transactions per year at Fortune 500 enterprises. The process can begin with a lifecycle event of an employee record in an IT system, such as a new hire record added to an HR database. Leveraging the Starfish technology platform to implement this type of automation follows a structured process:

1. Document use cases that involve communication administration workflows.
2. Document the current sequence of steps used to implement the required workflows.
3. Document any desired improvement of the process (besides the automation aspect).
4. Identify the appropriate trigger, and possibly the IT system that can generate the trigger, for each use case.
5. Identify which use cases are the most conducive for automation — the ones that are the most common or the most time-consuming.

There are two types of workflows: user-centric and device-centric.

User-Centric Workflows

User-centric workflows relate to onboarding, offboarding, and modifications of communication resources associated with users. The current processes need to be identified and documented. Most times the process begins with a lifecycle change of a user record in an IT system, followed by a work order sent to telecom for processing.

Automated user-centric workflows are integrated with lifecycle events of user identities in IT. The discovery phase determines which IT resources are involved:

- ✦ **Adding a new user** will trigger administration of devices and services that enable communication functions, such as a new phone, new mailbox, and the various accounts and settings for UC and contact center users.
- ✦ **Modifying user data** (name, location, etc.) will trigger updates to the associated user resources. For example, a location change may require tear-down of current resources and re-building them on a system in a new location.
- ✦ **Removing a user** should trigger an orderly de-commissioning and de-provisioning of resources, which may start with disabling resources and removing them at a later time.
- ✦ **Disabling a user** requires a workflow to trigger an immediate shutdown of all services in case it's needed, or for less-dramatic use cases such as leave of absence.
- ✦ **Enabling a user** triggers a workflow to reverse the one above.



Typically, the integration for user-centric workflows is with HR systems, corporate directories, identity managers, and IT service management systems (ITSMs).

Device-Centric Workflows

Device-centric workflows operate on specified devices, and sometimes on many devices in bulk. For example, a delegated administrator may need to change phone configuration settings for a member of their team, or an end user may need to reset a password for a specific communication application or device. These types of workflows can be triggered by an ITSM system, self-service portals, or task-specific portals for delegated administrators.

With all the use cases laid out and documented, automated workflows become low-hanging fruit that offers a big bang for a small investment. More complex workflows can be phased in as appropriate. Simply starting with a self-service portal for end users to reset passwords and manage phone buttons can make a huge impact.



Extending the Reach of Automation

The Starfish platform includes IT connectors that integrate communication management with IT systems, complemented by a set of solution portals. This extends the reach of automation to end users and delegated administrators with a set of administration and self-service portals to trigger task-specific workflows.

Users are authenticated and authorized to access roles-based portals. For example:

- ✦ **End user self-service portals** to enable password resets, setting communication options and configuring resources.
- ✦ **Help desk self-service portals** to enable help desk staff to manage other users' communication resources.
- ✦ **Delegated administrator portals** that can be scoped to have access to defined domains.
- ✦ **Telecom administrator portals** that allow triggering of bulk provisioning and de-provisioning, report generation workflows and various tasks that are conducive to automation.

The use of solution portals reduces the administration burden and the total cost of ownership of communication systems. **The benefits of solution portals include:**

- ✦ **Reduced manual workload.**
- ✦ **Increased responsiveness:** The portals can immediately process service requests.
- ✦ **Secured transactions:** Requests are validated and processed securely.

- ✦ **Increased usability:** The portals can be customized for localized user-friendly experience.

- ✦ **Increased customer satisfaction:** The users are in control. The service is available when needed, on their terms.

Consistency Ensures Success

Starfish also ensures a consistent approach to service delivery. Too often, inconsistent policies and practices bog down enterprise IT. Inconsistency creates speed bumps on the digital transformation journey.

Starfish applies consistent rules and processes, requires consistent authorization, and ensures all activities are logged and documented. Improved consistency reduces the need for manual exception processing.

Measurable Results

Starfish has deep roots and expertise in communications, integration, and automating workflows. Its technology is delivering extraordinary results at some of the largest and most sophisticated UC and contact center deployments in the world.

Here are a few customer examples:

- ✦ A major credit card issuer has fully integrated UC management with its IT service management system for automatic resolution of MAC requests, replacing cumbersome manual processing worldwide. The company is currently engaging Starfish to automate the management of its contact center resources.



- ✦ A top-five global financial institution is automating over 250,000 transactions per month! The Starfish technology platform is managing agent lifecycle changes (add, edit, delete) in its contact center environment with integration into the internal billing system. Additionally, the customer replaced manually intensive monthly auditing and reporting processes with streamlined (and more accurate) automated workflows.
- ✦ Starfish provides a self-service portal for a major health insurance provider. The result was a significant drop in resolution times. Starfish processed over 75,000 transactions in the first year at half the cost of the previous solution. Additionally, these services are available to its users 7x24x365.



The benefit of MAC transaction automation is easy to measure; however, the Starfish technology platform offers additional value: visibility into the entire enterprise communication solution. Customers consistently cite that having clear visibility into their communication resources equates to faster resolutions and better usage of resources. Visibility is facilitated by the Starfish connectors that audit and track resources across all communication servers and automated usage reports.

In addition to hard dollar savings that can be achieved with automation, there are many other intangible benefits and indirect savings to consider, such as:

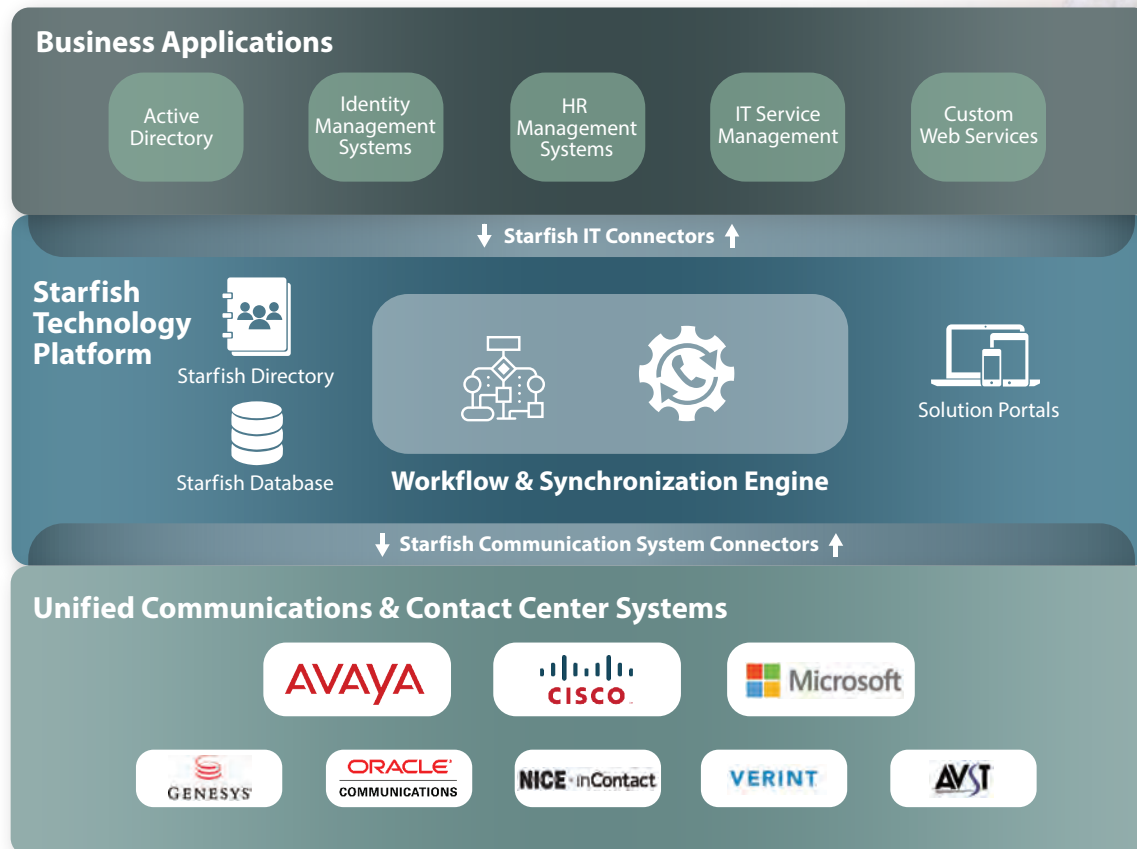
- ✦ Productivity enhancements by reducing the normal amount of time to complete a task (can be turned into hard dollars).
- ✦ End-user satisfaction derived from immediate resolution to requests.
- ✦ Cost avoidance, which comes from being able to handle greater volume of transactions without increasing head count.

While most large enterprises face similar communication management challenges, automation is not a one-size-fits-all solution. Every organization and industry vertical has its own nuances. Typically, the more complex the environment, the greater the business benefit, and the stronger the case for automation.



The Starfish Solution

Starfish provides communication management solutions for unified communications and contact center platforms. Our technology enables large enterprises to transform inefficient business processes into automated workflows.



Starfish Technology Architecture

The Starfish technology platform consists of a powerful workflow and synchronization engine along with an expandable set of connectors to various IT systems and multi-vendor communication systems. The connectors monitor IT systems that trigger workflows for specific events. For example:

- ✦ Lifecycle events of a user in an HR database
- ✦ Lifecycle events of an entry in a corporate directory
- ✦ Ticket submission in an ITSM system



Starfish offers solutions that leverage the technology platform for automation, self-service, and monitoring of communication systems including Cisco, Microsoft, Avaya, Genesys, and more. The solutions are also tightly integrated with IT applications including ServiceNow and leading identity managers.

Starfish solutions are deployed at many Fortune 500 and global enterprises, automating millions of transactions annually to help streamline and automate their communication management workflows.

The Future Depends on Decisions Made Today

IT professionals will continue to be challenged to find innovative and cost-effective solutions to optimize communication management processes. Automation in the fabric of the IT infrastructure yields impressive results for many of the world's largest enterprises — and these benefits are applicable to every large company.

While the future is hard to predict, it's reasonable to assume:

- ✦ The complexity of enterprise communications will continue to increase.
- ✦ The number of vendors and components that establishes the complete system will also increase.
- ✦ Administrative roles will always involve repetitive manual tasks.
- ✦ A mass-system migration is in your future.

Digital transformation is a journey, not a destination. Digital transformation requires not just digitization, but a new approach to address existing communication management processes to reap the benefits of transformation.



About Starfish

Starfish is a leading software company providing communication management solutions for unified communication and contact center platforms. Powered by our technology platform, Starfish provides enterprises with solutions for automation, self-service, and monitoring of communication platforms including Cisco, Microsoft, Avaya, Genesys and more. Our solutions are also tightly integrated with IT applications including ServiceNow and leading Identity Managers. Starfish automates millions of transactions annually for some of the largest Fortune 500 and global enterprises to help them streamline and automate their communication management workflows.

Starfish is headquartered in Bridgewater, New Jersey. To learn more about how Starfish can help drive digital transformation in your enterprise, please visit us at starfishassociates.com.