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# Whitepaper

## Enterprise Collaboration in Hi-Tech – Past, Present & Future

**Authors:**

**Rahul Bansal & Dan Kidd**



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## What is Enterprise Collaboration?

Virtually, every High-Technology enterprise organization today, has some degree of collaboration among its employees. Though differing in experience among different activity types and workflow models, Enterprise Collaboration generally refers to how large businesses provide employees the ability to work together in an efficient and productive way through online tools, applications, and platforms. Whether it's one unified experience to allow users to work together, or a set of systems/tools

used among employee groups to get their daily work done, collaboration among organizations, teams, and employees themselves, is often the heartbeat of a successful Hi-Tech (also High-Tech) business in the 21<sup>st</sup> Century. That being said, collaboration is hardly a 21<sup>st</sup> century idea itself, and large businesses have been working to get where we are now.

## The History

In the not-so-distant past, collaboration in the Hi-Tech enterprise is generally referred to getting a lot of people around a table, or conference call, and working on a project together; putting heads together in a collective space to produce the best outcome possible. The arrival of the PC and intranet into the Hi-Tech business environment started changing this perspective, introducing new tools like email and office productivity software into user workflows, and allowing for more ways of collaborating around documents and other files. From there, new Instant Messaging tools like Enterprise IM were created and started being used, allowing users and teams to chat with one another in real-time about their work. These tools were all exciting and useful, but were created in a relatively ad-hoc manner, were targeted to solve very specific pain points or needs, and often did not integrate in any meaningful way with one another.

The introduction of products like Microsoft Sharepoint in the early 20s finally provided some structure to Enterprise Collaboration at a high level, bringing server-based file storage to users and allowing for the first real software platforms to be created that were collaborative in nature by design. Flash forward to around 10 years ago and Enterprise Social Networks like Jive, Yammer, and others came along and began to create a new and more unified collaborative experience that integrated the functionalities of many different tool sets into a larger and more comprehensive platform.

One can imagine the impact a Software Engineer in IBM would experience on their daily workflows, as a result of these new innovations. Far more

efficient work could be done in tandem with other developers real-time input without scheduled meetings, questions or feedback could be answered immediately through a quick IIRC chat, code snippets could be swapped around via Usenet, reducing the workload of hand-building every line of code, even languages were becoming more robust and less unwieldy to work with. Though there was a lack of integration in this experience, the overall effect on efficiency through new collaboration tools was significant.

## The Present

But there's an underlying problem with where we are today – things have become disjointed and spread over many tools and platforms, some of which satisfy most needs in various ways, and others which just focus on one thing but do it well. Some are governed and some are not. Some are secure, and some are not. In almost every Hi-Tech enterprise environment, one can find redundancy and overlap in collaboration tools used by employees; multiple chat tools exist alongside one another with various levels of functionality, four different teams will be using four different Project Management tools, and etc. Google, Apple, Facebook, and nearly every other Hi-Tech company is suffering internally as a result. Fragmentation in the market has given us a collaboration landscape that is unclear and packed with technologies vying to be the next big thing in the space.

This confused and unwieldy picture of enterprise collaboration reflects the enormous sea-change taking place over the past 10-15 years. Digital infrastructure, mobile devices and a new generation of apps have made it possible for us to

connect and interact with each other and with our work wherever we are, whether that's just down the road or on the other side of the world. This has transformed not only how we work together, but also the nature of work and of the organizations we work for.

Let's take a look at the IBM Developer from before, in the context of their workflows today. Rather than sharing updates or changes in emails to their team, it's more likely they'll document and share such iterations into a purpose-built team/project space on a corporate Jive instance or reference them in a GitHub space accessible to other developers, who wish to make use of their project.

While they may still use Office productivity software tools to create content, these tools are very likely to include real-time collaborative editing and cloud storage features, as well as integrations with things like purpose-built development tools, enterprise social networks, email clients, and project management tools. Instead of using a purely text-based 1:1 chat tool, they are likely to use something like Slack or Mattermost, which allow for creation of project and team chat rooms, allowing for formatted code snippets to be passed around and iterated, and has rich media capabilities. Their files and projects stored on cloud services make their work accessible from anywhere, and viewable/editable to anyone with proper permissions. The entire scope and process of doing their daily work has become more streamlined, efficient, and truly collaborative with the current tools and platforms available.

A central issue currently being experienced in the space is that collaboration on this scale is

unfamiliar — far beyond what was possible or conceivable using previous generations of technology. So, we've all been learning, trying out different tools and techniques to understand what works best, from Jive and Office 365 to Dropbox, Slack, and the rest. Meanwhile, the tools themselves have been adapting in response to our trial and error, evolving the best fit for what we're starting to discover, we can achieve with this powerful new technology.

Let's take a look at the scope of collaboration tools and platforms today:

## Key categories in collaboration scope today:

### Personal

This category covers tools and workflows that are generally used to organize and share from a private or more personal tool initially. Examples include, Office or iWork products (Word, Keynote, etc.) where a document is created offline, then shared out to others once it's ready. Another example would be a personal Box folder where a user stores content they or others have made, but where only they have access.

### Ad-Hoc

This category covers tools and workflows that are generally used in an "on-the-fly" way. Examples include creating a quick email to ask a question, or share a doc you need feedback on from just one or a few others. Another example would be using a chat platform to send a quick query or piece of information to another user. These are generally

unstructured inside of workflows, happening when a need or circumstance arises.

## Team

This category covers tools and workflows that are used in team-oriented ways. Examples could include team Box folders, Enterprise Social Networks (ESNs) such as Facebook Workplace, or an enterprise Jive installation, a team chat room set up in Slack or HipChat, and etc. These are used by teams to keep up-to-date on docs, track tasks, discuss projects among groups, house content and collaterals used by the team, and generally work as a team in real-time, along standardized processes.

## Project

This category covers tools and workflows used in project-oriented ways. These can include tailored versions of many previously mentioned examples like a project area on Jive, but can also include agile sprint planning tools, such as Jira or a project segment of an Enterprise Collaboration Hub that pulls and displays information from various tools used in the project for the user to interact with.

## Process

This category covers tools and workflows used in process-oriented ways. HR and Legal teams, for example, use this type of collaboration to inform and enforce expected behaviors through providing documentation, tasks, and etc. to segments of employees as necessary. Company HR intranet portals, purpose-built ESN areas for corporate messaging, are good examples here. These are useful because documents can be updated and versioned as necessary and

employee compliance can be tracked and enforced in very efficient ways.

## Community

This category covers more generally-available platforms and business-oriented workflows, rather than specifically work-oriented ones. Examples could include enterprise-wide ESN areas, internal activity hubs built around company networking events. Businesses generally use this type of collaborative environment to foster high-level discussions, disseminate important information, collect company-wide feedback for various processes and initiatives, and more.

## Constituency

This category covers collaboration oriented towards a specific constituency; a group of people to whom a product, project, team, or otherwise is important, specifically. The best examples of this include stakeholder groups or areas on internal portals, platforms, ESNs. Other examples can be less high-level, such as global businesses organizational portals for employees in various regions of the world to work on projects or tasks. In all cases, the result is a collaborative space or tool directed at a very specific group.

## The Future

Where's it all leading to? With recent product announcements, and according to industry research in the High-Tech enterprise area, some clarity might just be on the horizon finally. One of the problems for vendors in the collaboration market has been that their products all started out as one or two niche features, whether





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in messaging or conferencing, file sync and share, document creation, or project management. Extending out from those initial features to create an integrated platform that's able to break down the boundaries – truly integrate all internal documents, tools and applications into a centralized hub experience – to enable real, frictionless communication, content management, and task completion, that's the trick we're all waiting to see happen. It's not out of the realm of possibility that in the future, our software developer will be able to channel all of their daily workflows and tasks through a single comprehensive platform that integrates all of their various collaboration tools into one user experience. No more bouncing around between platforms, apps, and websites but rather an intelligent integration hub that allows them to interact with various tools from a single user interface that every other internal user also has access to and uses to complete their work each day.

As the leading platforms take shape, the big question left unresolved is, where does the center of gravity lie for collaboration in the digital enterprise? From our perspective, there are four main possibilities.

### **Messaging**

The rise of mobile notifications and intelligent agents has simplified collaboration to the point where many tasks can be completed just by viewing and responding to a message stream. But while the efficiency and immediacy of messaging is good for tasks that have to get done now, what about those that persist over time?

### **Content**

Virtually, all High-Tech enterprise processes typically revolve around one or more items of content, whether that's a single transaction record such as a purchase order, a collection of documents that a sales team might use to close a deal, or a presentation a product team would work on while developing a new offering. The challenge with keying off content has been how to reliably make it available to multiple team members spread across many different locations and with disparate permissions levels.

### **Applications**

Switching from one application to another to get things done, causes unnecessary friction. Many people already spend much of their working day in one or two applications, so why not make collaboration part of that same environment rather than a separate activity? A potential issue of course is the ad-hoc nature of teams, where the applications used are out of line with other teams. It can be difficult to design any real architecture around a shifting application environment.

### **Teams**

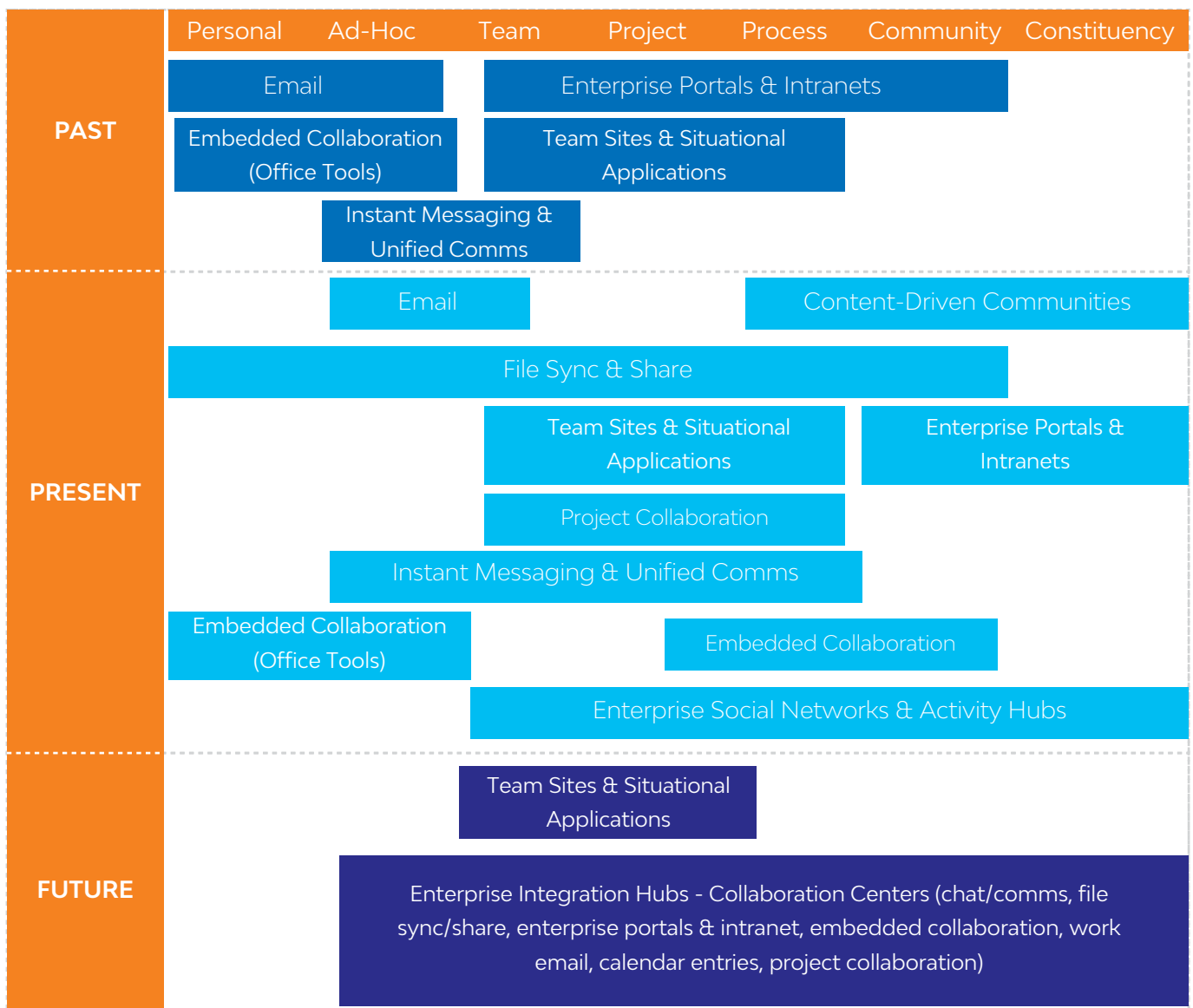
Some forward-thinking enterprises are exploring flatter organizational structures where work gets done in more autonomous ways among cross-functional teams that co-ordinate with other teams to meet agreed goals. Here, the members of each team agree how they'll collaborate and while the enterprise may recommend specific tools, the ultimate decision rests with the team. Generally, these

are expressed as dashboarding platforms; allowing users to customize their tools/applications workflows and streams and keep up-to-date via visualized displayed chunks of relevant information.

Of course, it's wrong to imply that these four options are mutually exclusive. Any successful

collaboration platform will satisfy all four to a greater or lesser extent, accommodating messaging, content, applications and team autonomy alike. One can only hope that we find our way to this brave new world sooner rather than later. High-Tech enterprise employees everywhere are waiting with baited breath.

## Hi-Tech Enterprise Collaboration Scope



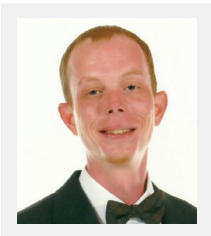
## About the Author



**Rahul Bansal**

Project Manager, Enterprise Collaboration, Consulting, LTI

Rahul is a Project Manager & Manager Consultant, with experience in enterprise collaboration, business strategy across domains of Hi-Tech.



**Dan Kidd**

Senior Technical Consultant, Enterprise Collaboration, Consulting, LTI

Dan is a Community Manager and an expert in the Enterprise Collaboration space, with experience as a business analyst and internal Systems Architect.

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