



## Human Processes

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## Big Processes

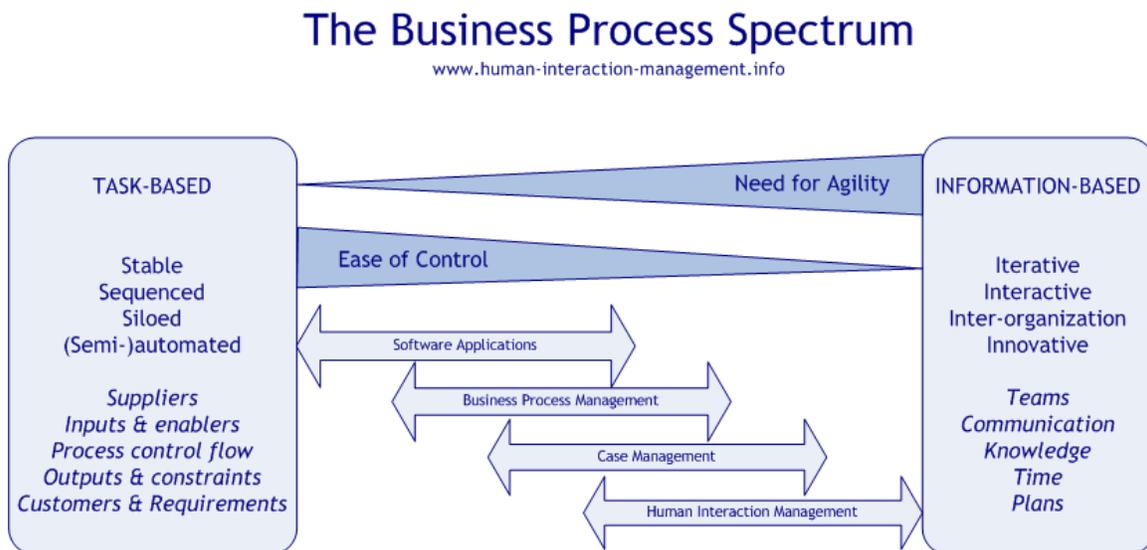
It is now over a year since the first large-scale Human Interaction Management System (HIMS) deployments started – the reference implementation of a HIMS, HumanEdj, came out of beta in early 2009. Here are some HIMS case studies, along with discussion of what they tell us about the new landscape emerging for process management software.

### The Business Process Spectrum

Let's start with some general observations.

Real-world deployments have confirmed that the HIMS is not a replacement for other process management tools such as BPM systems or software for Case Management ("Adaptive" or otherwise). Rather, it is complementary - more often than not, a combination of technologies is required.

Here is a diagram from the Human Interaction Management (HIM) Web site illustrating how the various types of process management software fit together:



**Figure 1: The Business Process Spectrum**

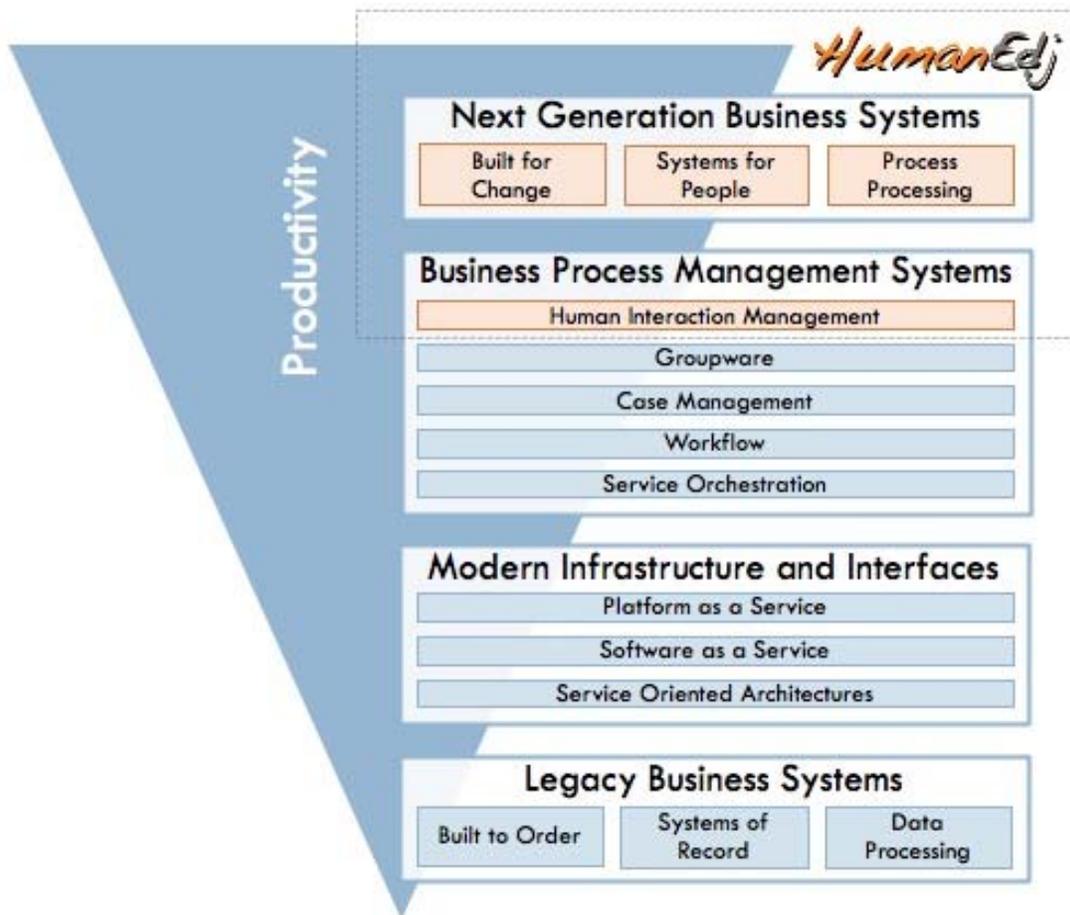
Processes are shown on a spectrum ranging from the most static and automated (many finance processes are like this - payroll is the classic example) to the most dynamic and human-driven (complex sales, project management, issue resolution, incident response, and so on). Different

software tools are required for different types of process. For instance, invoices are often issued from an ERP system, and insurance quotes approved using a BPMS. However, few organizations would use anything without the flexibility of a HIMS to handle an internal restructuring, just as few governments would use anything without the flexibility of a HIMS to resolve a dispute or fight a war.

Although this breakdown makes intuitive sense to most people (“horses for courses”), and corresponds to their own experience, there is still an architectural question – how to integrate a plethora of software products including not only those for process management shown above but also diverse supporting systems (content management, email servers, business rule engines, and so on) into an effective IT backbone for an enterprise. Just saying “SOA” is not going to cut any mustard here. Web service calls are a means to an end – but what is the end?

## Next Generation Business Systems

Here is another diagram from the HIM Web site:



**Figure 2: Next Generation Business Systems**

This gets us a little closer, in that the HIMS is shown as the top layer of a stack in which other components appear at different levels. However, a little more insight is required in order to determine how to build this stack. Which processes go where, when just about every software

product (even some email systems) claims support for “tasks”? How is *work itself* distributed across the stack?

Real-world enterprise deployments of HumanEdj are making it clear that there is a certain type of process that belongs at the top of the stack – and further, that once you start implementing such top-level processes, the rest fall into place more or less naturally. I will call these top-level processes “Big Processes”.

It seems that there are at least 4 kinds of Big Process:

1. **Overarching** processes help managers improve productivity;
2. **Underpinning** processes help IT become more flexible;
3. **Connecting** processes help build partnerships both inside and across organizations;
4. **Remembering** processes help organizations improve their operations.

The defining characteristic of a Big Process seems to be that most people don’t realize it is there at all. Business analysts have become so used to identifying “process” with “something that can be drawn as a flowchart” (usually, these days, with tasks split across swim lanes) that all other enterprise activity is invisible to their eyes. This is bizarre when you consider that Big Processes are not only the main feature distinguishing organizations from each other - and hence in many cases determining their respective bottom lines - but also the aspect of organizational life that takes up most of the time of the most expensive people.

Once you stop identifying processes with flowchart diagrams, you see the elephant in the room and the Big Processes come into view. Just like when the hidden 3D image appears in a Magic Eye picture, your perspective is altered irrevocably. A new world opens up, a world in which you can effect order-of-magnitude changes while your competitors are tweaking the details of their operations.

Each type of Big Process is discussed below, with reference to a HIMS deployment of such a process and description of the other software tools used in tandem.

## B

### Big Process Type 1: Overarching

Overarching processes help managers improve productivity.

It may sound as if this is a tautology. What else do managers do except improve productivity? In fact, this is the function of a specific form of management. HIM theory divides management into 3 separate “Levels of Control”:

1. **Management Control**, which is about improving productivity;
2. **Executive Control**, which is about focusing resources on strategic goals;
3. **Strategic Control**, which is about setting strategic goals.

Here I will look at a case study of using a HIMS for Management Control.

In a HIMS, work processes are thought of as “Plans”. A Plan divides work into “Stages”, with different Stages having different purposes. In each Stage, the people involved play Roles to provide deliverables. You must be a member of a Stage to have access to deliverables of that Stage. Messages sent as part of a Stage are automatically sent to all members of the Stage.

The work as a whole is overseen by a Plan owner, who adjusts the Plan throughout its life as the work progresses, starting, ending, adding, removing and changing Stages as necessary. Others in the Plan have more limited options for changing it, restricted mainly to their own Role.

There is a lot more to a HIMS, which must implement the 5 principles of HIM:

| The 5 principles of Human Interaction Management   |  |  |   |  |
|--|--|--|---|--|
| <p><b>Team building</b><br/>To create effective teams, it must be clear who is involved in a particular process, and what each person brings to the table. As a starting point, the identity, skills, experience, and personal characteristics of each person must be captured. It is then necessary to define each individual's responsibilities, and negotiate their commitment to accepting these responsibilities.</p> | <p><b>Communication</b><br/>If people are to manage their interactions with others better, their communications must be structured and goal-directed. Within a process, there must be specific channels of communication for different purposes, each of which unifies messages transmitted via a variety of means (email, text message, FAX, voice-over-IP, etc).</p> | <p><b>Knowledge</b><br/>Organizations must learn to manage the time and mental effort their staff members invest in researching, comparing, considering, deciding, and generally turning information into knowledge and ideas. The people responsible for creating and managing this knowledge must be able to control its usage and distribution.</p> | <p><b>Empowered time management</b><br/>Humans may not sequence their activities in the manner of a software program, but there is always structure to human work, which must be understood and institutionalized so that it can be managed and improved. This means empowering people to choose and/or create their own work activities from an appropriate range, guided by understanding of organizational context (so that they can aim to deliver maximum value) and restricted by business rules that prevent contravention of applicable policies and standards.</p> | <p><b>Collaborative, real-time planning</b><br/>Human activities are concerned often with solving problems, or making something happen. Such activities routinely start in the same fashion - by establishing a way of proceeding. Before you can design your new widget, or develop your marketing plan, you need to work out how you are going to do so - which methodology to use, which tools are required, which people should be consulted, and so on. In other words, process definition is an intrinsic part of the process itself. It takes place via negotiation between all involved parties, and is not a one-time thing but happens continually throughout the life of the process.</p> |

Figure 3: HIM Principles

... via the corresponding modeling framework:

| The modelling framework that implements HIM principles   |  |  |   |   |  |
|--|--|--|---|---|--|
| <p><b>How to Work</b><br/>R – Research<br/>E – Evaluate<br/>A – Analyze<br/>C – Constrain<br/>T – Task</p>   | <p><b>How to Learn (Research)</b><br/>A – Access<br/>I – Identify<br/>M – Memorize</p>   | <p><b>Work and Workers</b><br/>Human Driven Work or Mechanistic Work<br/>Interaction Worker or Independent Worker</p>  | <p><b>Conversations</b><br/>For Possibility<br/>Do we want to work together?<br/>For Disclosure<br/>On what basis?<br/>For Action<br/>Request/Promise<br/>Offer/Accept<br/>Report/Acknowledge</p>       | <p><b>Levels of Control</b><br/>Strategic<br/>External to work process<br/>Overall sponsor<br/>Defines key deliverables/metrics<br/>Executive<br/>External to work process<br/>Accountable/informed/consulted<br/>Refines deliverables<br/>Defines key<br/>Roles/Interactions/Activities Management<br/>Internal to work process<br/>Responsible<br/>Refines initial process<br/>Facilitates/monitors process and its evolution</p> |  |
| <p><b>Users</b><br/>Identity<br/>Physical Location<br/>Virtual Location<br/>Relationships<br/>User Type<br/>Capabilities (knowledge and experience)<br/>Organizational Authority<br/>Characteristics</p> | <p><b>User Characteristics</b><br/>Action Shaper<br/>Implementer<br/>Finisher<br/>People<br/>Coordinator<br/>Teamworker<br/>Investigator<br/>Cerebral<br/>Plant<br/>Evaluator<br/>Specialist<br/>Leader<br/>Manager<br/>Executive<br/>Strategist</p> | <p><b>Activities</b><br/>Units of work<br/>Include one or more<br/>Tasks<br/>Atomic<br/>Transactional:<br/>Failure of any Task<br/>=&gt; undo of all Tasks</p> | <p><b>Roles</b><br/>Goals<br/>Responsibilities<br/>Interests and Agreements<br/>Information (private)<br/>References to other Roles<br/>Capabilities (powers and permissions)<br/>Process Authority</p> | <p><b>Speech Acts</b><br/>Intended Manner (aka Illocutionary Force)<br/>Assertive<br/>Directive<br/>Commissive (Promise, Intention)<br/>Expressive<br/>Declarative<br/>Intended Effect (aka Performative)</p>   |  |
|  |  | <p><b>States (Rules)</b><br/>Pre-Condition<br/>Post-Condition</p>  | <p><b>Interactions</b><br/>Asynchronous<br/>Exchange of Information<br/>Exchange of Intent (Speech Acts)</p>  | <p><b>Resources</b><br/>Offline / online<br/>Information within Role<br/>Atomic – digital<br/>Shared by Role</p>  |  |
|  |  |  | <p><b>Interaction Patterns</b><br/>For deciding on next steps<br/>Agreement<br/>For doing work<br/>Collaborative Transaction</p>  |   |  |

Figure 4: HIM Modeling Framework

However, the simple scheme outlined above – the most basic use of a HIMS, and often all that is exposed in a Web user interface - is enough to radically improve productivity. A systems

integrator who used HumanEdj as the focal point of a platform for newsroom content creation and distribution found that, from the very first user trials, productivity improved four-fold.

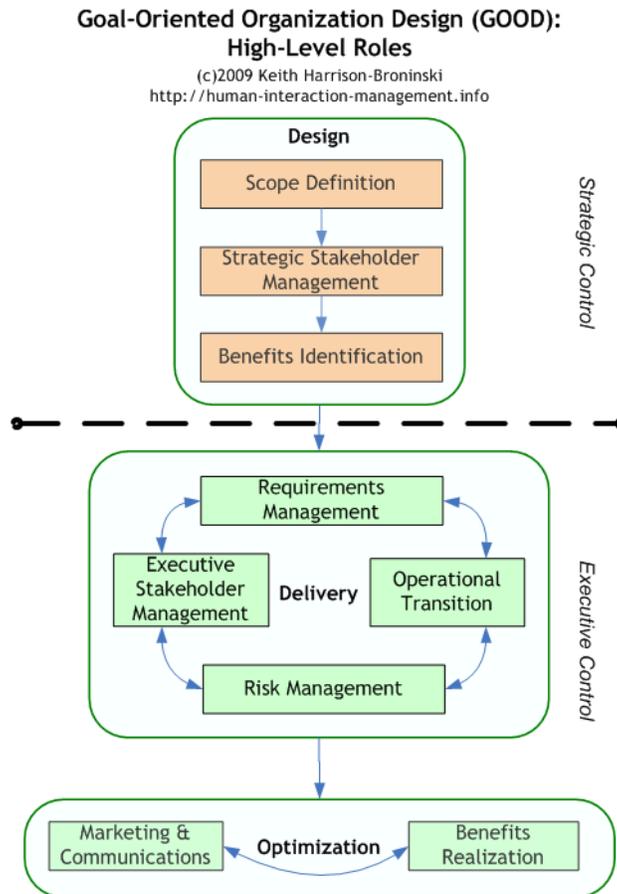
The platform used the HIMS to synchronize hand-off between the various different tools required. Unless you know the media industry, this may sound like a typical BPMS application. The real problems, however, are the numerous unpredictable exceptional cases that arise when video material or accompanying soundtracks are poorly matched, either to each other or to the supposed purpose of the content. Not only are such cases very common, but they occur under intense, frenetic and highly pressurized conditions in which rework typically leads to wasted effort and repeated frustration. The HIMS eliminates such stress – i.e., feeling out of control - by making the entirety of the Plan visible and transparent to all involved, and giving the Plan owner the means to make immediate changes that solve problems.

Note that each HIMS Plan calls a BPEL-based workflow system for the automated transcoding and routing of media content. Any problems encountered during workflow processing are reported back to the appropriate member of the corresponding Plan, who then addresses the underlying cause(s) with minimum delay and with full knowledge of the context.

The key insight here is the separation of highly flexible work (content creation) from highly repetitive work (content transcoding and distribution). Although both are tightly structured in process terms, and require integration between multiple software tools, their respective position on the Business Process Spectrum above means that the former is HIMS territory and the latter BPEL territory. Trying to deal with unexpected rework in a BPMS process generates an unusable forest of loops, and structured messaging between more than 2 people is not possible at all. Similarly, a BPMS provides Web service integration tools that cannot be matched by a HIMS.

Further, content is king, so the HIMS process calls **down** to the BPEL process, which responds with notifications as appropriate. Recognizing the primacy of knowledge work leads to a clean and effective division of labor.

Most organizations that deploy HIMS software for Management Control look next at using the Goal-Oriented Organization Design (GOOD) method to extend HIMS into the domain of Strategic and Executive Control:



**Figure 5: Goal-Oriented Organization Design (GOOD) - High-Level Roles**

GOOD was developed originally for use in a major government programme, in which several hundreds of millions were spent to co-ordinate activities across multiple areas and organizations. In future columns I will discuss the adaptation of GOOD to smaller scale work, and the application of HIMS technology to GOOD.

## Big Process Type 2: Underpinning

Underpinning processes help IT become more flexible.

Of course, IT is not the only facility that “underpins” modern organizational work. Other underpinning facilities include electricity, furniture, stationery, cleaning, catering, and so on. The reason I single out IT for attention is that, for the moment at least, most organizations have a Chief Information Officer (CIO) or Head of IT. They do not usually have a Chief Electricity Officer or Head of Cleaning – although they sometimes used to.

For example, until the 1930s large companies typically had a “VP of Electricity”. Most don't anymore, because electricity is a reliable utility that the supplier takes care of, not the consumer. The emergence of “electricity as a service” removed the need for companies to manage their own power sources (except for those few companies who play the electricity market). In due course, “software as a service” will do exactly the same thing for IT.

The major obstacle in the way of true utility IT is the difficulty of integration. Unless you purchase all your software from the same source, it can be very expensive to connect up the dots, and even if you are (for example) a pure IBM or Microsoft shop, there is still a lot of work to do to make your IT backbone perform optimally.

It is necessary to cut the Gordian knot, which in this case means recognizing that not everything needs integrating, and it may even be sensible to dispense with parts of your current infrastructure. It can be hard to quantify the true cost of IT projects, but those who try often find that the Return-On-Investment of an integration effort is minimal, or even negative, when Total Cost of Ownership (TCO) is taken into account. Paul Strassman's analysis of US Department of Defense spending in FY2006 shows of a total spending of \$30.1bn, Information Infrastructure consumes 51%, an overwhelming amount of the IT budget:

"The entropy of the IT structure becomes apparent through an examination of the scope and funding for 4,121 IT projects planned for FY2006. The budgets for most of these projects are small with funding of less than \$5 million each. Such projects can be devoted primarily to the perpetuating and upgrading of local solutions. As result the rising entropy in the system prevails because resources become consumed for maintenance and only marginally for improvements of organizations that were designed to deal with obsolescent processes."

<http://www.archive.org/details/I.t.SpendingAsAMeasureOfOrganizationalDisorder>

This view goes against the grain of thinking in IT for the last 30 years, which has been firmly focused on provision of a tightly integrated enterprise IT backbone. Out of this thinking arose the BPMS, essentially a tool for joining up dots, whose greatest strength is also its greatest weakness - automation via Web services. Web service integration not only requires specialist (and hence expensive) expertise, but is fraught with danger – one incorrect service call, repeated enough times, can put you out of business. Time and trouble must be taken to avoid mistakes (especially since many BPMS products do not come with engineering-quality testing tools), and when mistakes occur, they are costly.

Web service integration is justified, and can bring huge advantage, where processes are repeated a great number of times without change (as in the newsroom platform example above, where transcoding and distribution activities are set up once then repeated ad infinitum). However, applying BPMS tools to a flexible process is using an elephant gun to shoot a fly – you are more likely to damage the furniture than to hit the rapidly moving object of your attention.

A similar argument applies to the emerging field of Adaptive Case Management (ACM). Paul Harmon describes ACM as concerning "rule-based or agile workflow systems" that depend "on dynamic planning, "Tasks" ("templates") and rules":

"The knowledge worker about to undertake the specific case considers a list of tasks and decides which he or she will use for this specific case, and in what order the tasks will be attempted. In other words, one of the first tasks in the case involved planning the tasks and tentative sequence for the specific case ... The structures of the tasks themselves are largely based on the use of rules ... Adaptive Case Management suggests how the rule-based techniques might take over and provide developers with tools that make it easier to model and automate knowledge structures and knowledge-based tasks."

<http://bptrends.com/publicationfiles/07-06-10-BR-Adaptive%20Case%20Mang-%20Swenson1.pdf>

As with the BPMS, the strength of an ACM system is also its weakness. In this case the information support provided to knowledge workers by a rule engine is balanced by the complexity of maintaining that engine. Harmon points out that this "return to knowledge-based techniques that predominated in the Eighties" is a "significant step" that may well provide some much-needed support knowledge workers, but:

"I do not believe [ACM systems] can be scaled to deal with really complex problems – for the same reason that expert systems failed – because the rule maintenance problems would be too expensive. I do believe, however, that the time is right to apply these techniques to extending BPMS tools for use with processes that include tasks that depend on knowledge. Moreover, as these applications illustrate, the tools only work if there are knowledge workers to plan each case and adjust the tasks and choose among the options offered by the ACM tools. In other words, we are always talking about a Decision Support tool here rather than a fully automated solution."

In a sense, the ACM system provides Communities of Practice in software form – sources of knowledge and experience on which the practitioner can draw when needed to solve specific problems. In fields such as aerospace, the value of Communities of Practice is well recognized – along with their limitations. Advice from peers may well help a structural engineer pin-point a flaw in a rotor blade, but it won't help the project manager responsible for a new jet engine co-ordinate the efforts required to test and resolve issues in a system with over 32,000 variables, where each issue may have aspects whose resolution requires structural, system, materials, operational, safety, and other specialists to work together. Similarly, a financial analyst may find it very helpful to have support in modeling the details of a merger, but the work itself – everything from market repositioning to product rebranding to organizational restructuring – is huge, messy and beyond the scope of any rule engine.

To provide IT support for large-scale dynamic work processes – in other words, to turn on a tap that provides utility IT across the entire organization – the nature of that IT support must be radically simplified. Flowchart diagrams with their swim lanes and decision gates are out, for one thing, since these are only suitable for programmers. Rules with their conditions and consequences are also out, since their complexity scales exponentially with the size of the process. Rather, it is necessary to focus on the 5 principles of HIM (illustrated above in more detail via Figure 3: HIM Principles), which make it possible to provide fast, cheap IT:

1. Effective team building
2. Structured communication
3. Knowledge creation
4. Empowered time management
5. Collaborative, real-time planning

I recently ran a 2 day HumanEdj workshop for a public sector organization. Before lunch on the second day, I asked the attendees to bring to the afternoon session descriptions of the most complex and troublesome processes in their organization. Starting at 2pm, we looked over these and chose the largest and most labyrinthine, a huge process for planning customer services spanning multiple departments in their organization. This process had taken weeks to document, producing documents and diagram of such complexity that few of the workshop attendees could understand at first how it was supposed to work.

By 3:40pm, we had entered the process into HumanEdj (although none of the attendees were technically oriented) and produced an executable Plan whose operation was obvious at a glance, and that everyone was keen to use in practice. By removing complexity due only to use of inappropriate tools and techniques, we had cut the Gordian knot. In less than 2 hours, we had provided cloud-based IT support for a large-scale dynamic process without need for any specialist expertise whatsoever.

### Big Process Type 3: Connecting

Connecting processes help build partnerships both inside and across organizations.

It is now well-recognized that the modern path to business success is one of connect-and-collaborate, rather than command-and-control. Peteringar, author of "Extreme Competition", writes:

"To win at the game of innovation in the 21st century, you must become so close to your customers that you can anticipate their needs even before they do. And the only way you can do that is to connect and collaborate with your customers, helping them to improve their business processes, the ways they get work done, the ways they solve problems, the ways they satisfy their ever-changing, never-satisfied needs."

<http://www.bpm institute.org/articles/article/article/the-globalization-of-innovation.html>

The supply chain and the sales pipeline are becoming indistinguishable – all part of an organic, dynamic system geared towards maximum effectiveness for minimum cost. Even large organizations that once dominated their suppliers now recognize the value in collaborating more openly and democratically, as the Internet levels the playing field further and further.

To support this networked economy with IT, it is necessary to use systems capable of implementing cross-boundary processes. A HIMS does this automatically. For example, in the same way that email conversations often span multiple organizations, domains and mail servers, participants in a single HumanEdj Plan often use different HumanEdj instances, without requiring access to each other's servers (or knowing what these servers are). They can even use email to join in - i.e., not use HumanEdj at all but still take part in the Plan.

Further, access to each data item within a Plan, including data created on the fly, is automatically restricted to specified participants. So, for instance, all parties in a legal negotiation or complex healthcare treatment can use the same Plan, although they may work for different organizations and have different privileges, since they are safe in the freedom to reject any change proposed by the Plan owner that might compromise the security or confidentiality of their information.

Recently an innovative services organization turned to HumanEdj in order to bring clarity to a sprawling process for proposing new projects. This process, fundamental to their business operations, spans multiple departments. At the start, there was no real understanding of the process at all in the organization – there was not even agreement on whether the work represented one single process or several different processes.

After analyzing the work in HIM terms, and creating a first cut Plan in HumanEdj, not only was the general shape of the process clear to everyone, but managers realized that in fact it represented a specific example of a much more general (and very common) process for the sharing of human resources across multiple areas of authority.

Further, the model underpinning HumanEdj – of Stages under the control of a Plan owner – meant that it would be possible to extend the first cut Plan both backwards in time (to the origination of new ideas) and forwards in time (to execution of the projects themselves). In the latter case, project execution, the core Plan could be extended to include other organizations who worked as partners in specific projects, thus providing a natural integration across external as well as internal boundaries.

In this case, there was little need for workflow-style automation. However, there was a need for participants to create and share documents such as financial models. HumanEdj provides content management facilities natively (upload, download, sharing, and versioning of documents) but in order to integrate the Plan more fully with the IT backbone of the organization, their existing Enterprise Content Management (ECM) system was used to store the documents created as part of the process.

Note that, when such documents are accessed from within the HumanEdj Plan, the users are not aware of using an ECM system at all - they just click on a link and the document in question

opens in their Web browser. By comparison, previously when using the ECM system directly they had to use (and sometimes to configure) complex forms in order to store and retrieve documents – a “feature” that discouraged some people from using the ECM system at all. By placing a HIMS above ECM in their IT stack, the potential value offered by the ECM system was finally realized, since it was now integrated seamlessly into a core enterprise process.

## Big Process Type 4: Remembering

Remembering processes help organizations improve their operations.

Although most people know Santayana's saying, “Those who cannot remember the past are condemned to repeat it”, few organizations live by this rule. Some organizations claim to have reached level 5 of the Capability Maturity Model:

“Optimizing - process management includes deliberate process optimization/improvement.”  
[http://en.wikipedia.org/wiki/Capability\\_Maturity\\_Model](http://en.wikipedia.org/wiki/Capability_Maturity_Model)

However, few organizations apply this optimizing activity to knowledge work processes in any kind of structured manner. Typically, their “level 5” describes how they approach routine, semi-automated processes, using techniques such as Lean and Six Sigma to reduce time and cost. It is now becoming recognized more and more widely that an equally great – some would say far greater – advantage can be gained from improving the way in which your most expensive staff collaborate to make and implement the decisions that determine how your organization operates.

Organizational memory must be extended beyond the factory floor and transaction processing, into the domain of Big Processes, and *use of that memory* made into a core part of business operations. Maintaining and leveraging memory is itself the final kind of Big Process.

Further, it cannot be too long before the same restrictions now placed on financial management – legal and statutory requirements for auditing, and implementation of security measures to prevent fraud – extend into knowledge work. To make this a reality, a sine qua non is the implementation of organization-wide Remembering processes for knowledge work.

Of course, it is almost impossible to record and analyze full details of how knowledge workers go about their business – to capture every text message, transcribe every phone call and fax, record every meeting, and so on, then place all this in context. To even attempt to do so would mean extending existing, and already cumbersome, Customer Relationship System (CRM) tools to breaking point and beyond. However, using a HIMS it is a simple matter to document the **outcome** of such business activities.

A HumanEdj Plan, for example, typically includes data fields that record key decisions made, along with any supporting contextual information. The work of the Plan is progressed by collaborating to update these fields, so their maintenance becomes a core part of the knowledge work itself, rather than an inconvenient extra task necessary after the day's work is finished (as can be the case with CRM). As with ECM in the case study above, knowledge capture becomes a seamless and automatic part of daily activity.

Pilot studies are currently underway for the use of HumanEdj in healthcare. For example, consider the common case of a patient whose problem requires GP visits, specialist advice from multiple sources, and ancillary tests such as X-rays or MRI scans. This process, which may be urgent, is frequently held up not by lack of resources, but by the time required to arrange appointments, prepare and circulate test results, discuss findings among the various practitioners, and so on. It is the *gaps between work* that cause delays, and thus the consequent impact on patient well-being as well as extra cost.

However, it is a very simple matter to use a HIMS to streamline healthcare processes. HumanEdj Plans, for example, are created from Templates, which can be as minimal as desired – since each Plan is simple to extend during usage, without need for technical expertise. As the patient progresses through their treatment, they extend their own Plan to add the new clinicians who will treat them. Effectively, they manage the treatment themselves. A HIMS makes it possible to take the responsibility for progressing each case away from over-burdened healthcare professionals who are dealing with hundreds of cases each week, and to place it in the hands of the rightful “Plan owner”: the patient, who is not only highly motivated to conclude the case successfully but has enough time to do so.

Further, since Plans are automatically recorded in a repository, the clinicians involved and their managers are now able to examine past cases in order to learn from them. This is done by building higher-level Plans whose purpose is to improve operational work. Such a higher-level Plan may be used by the manager of a group of clinicians, who has access by default to the Plans that they have used. Alternatively, the higher-level improvement Plan may be more wide-ranging, and apply business intelligence techniques to Plans from across the organization. Plans can be inspected individually by using custom views to highlight points of interest – for example, all HumanEdj Plans are stored in a range of standard formats including the Web developer’s notation of choice, JSON. Alternatively, summary data can be harvested from a number of Plans and charts or reports created using tools ranging from Excel to specialist analytical applications.

Simply by doing their patient treatment via Plans, each healthcare organization involved gains the ability to look back at their work, with full context, and make informed decisions about how to improve their operations in future.

Finally, the complex, cross-boundary processes of healthcare typically require support from external systems for diagnosis, prescription, image analysis, and so on. Here a Task in HumanEdj may well be implemented via invocation of a Task in an ACM system – an expert system based on rules. By implementing the Big Process in a HIMS, the smaller-scale ACM process comes into its own, as a valuable aid to complex decision-making. As in the other examples above, placing HIMS at the top of the stack allows seamless integration of other high-value software tools.

### **Summary: Putting a HIMS at the top of the IT stack**

The IT industry is finally starting to learn that different tools are required for different purposes – the Next Big Thing is connect-and-collaborate in more than one sense. But how are all these tools to be integrated? When is integration necessary at all? Which Web service calls are to be made, from what to what, and when?

The question appears to be complex, since systems of different types often overlap in functionality. For instance, HumanEdj can make and receive Web service calls by REST and SOAP, using transactions with compensation – does this make it a BPMS? Similarly, HumanEdj includes a rule engine and can be extended via scripting to implement any desired consequences – does this make it an ACM system? HumanEdj stores documents in a repository – does this make it an ECM system?

The answer to all such questions is no, since as any designer will tell you, usability of functions is determined by the form of their presentation. HumanEdj is not intended to act as a BPMS or ACM system, any more than a BPMS, ACM or ECM system is intended to support for Big Processes. It is easier to design financial transaction processes using BPMN and BPEL via a BPMS than to attempt the same thing in a HIMS. Similarly, it is easier to build an expert system for actuarial analysis in an ACM system than using the rule engine inside HumanEdj. A HIMS is designed to provide support for Big Processes, and to integrate with other systems for routine work, decision support and repository storage.

How is this integration actually implemented? Experience shows that this is typically via extension of the Intranet into a complete knowledge work platform.

For example, setting up HumanEdj for individual or small company use simply involves running the wizard on Windows, or unzipping the download and installing Apache CouchDb on other platforms. However, larger organizations need to make the software part of the daily experience of their knowledge workers, which means making it a core part of their Web browser usage pattern.

When you run a Web browser on a workplace computer, your home page is generally an Intranet front page. The underlying intention of this is to route your work through the facilities provided on that Intranet. However, since most Intranet sites don't let you do much more than search documents and enter timesheets, the first action of many knowledge workers is to navigate away from the Intranet entirely, in order to visit sites that they already have in mind, and that they need to use in order to achieve their working goals.

A HIMS brings these people back home to the Intranet, by making it simple to use the Intranet for knowledge work. For example, the AJAX Web application that comes with HumanEdj is effectively a set of Web page templates, that can be customized to any extent desired (branded, simplified, extended, and so on), then included as part of an Intranet site. So when you login to the Intranet, you immediately see what is on your To Do list along with the full current context of all Plans you are engaged in – and can jump straight to the work itself without leaving the Intranet. If you need to use new external Web sites as part of to a Plan, you add them to the Plan to make it quicker for your own use next time (which incidentally saves the links for future use and analysis by others).

It quickly becomes more natural to do your work via the Intranet than not to do so. The Intranet comes into its own, as a dynamic top layer of the IT infrastructure, providing seamless access to the rest of the IT stack.

## Take away

The global recession is creating new and complex challenges:

1. Become far more productive;
2. Build truly dynamic infrastructure;
3. Manage partner relationships for maximum value;
4. Improve knowledge work continually.

The solution is simple – place a Human Interaction Management System at the top of your IT stack. Use a HIMS for your Big Processes and everything else falls into place.

Integration in particular becomes simple and painless, since it is then obvious where and how to use your BPM, ACM and ECM systems. The HIMS unlocks the true potential of these systems, allowing you to reduce spiraling maintenance costs created by previous unwieldy architecture, and to deliver greater value to end-users - who no longer see separate systems at all, but rather a unified Intranet geared towards helping them do their daily work.

What is more, it doesn't take long, or cost much, to use a HIMS for Big processes. A 2 day workshop is enough to train people in HIM principles and get them building real, working Plans ready for operational use. These people don't have to be technical – in fact, it can be better if they are business-oriented. The top of the IT stack is where the rubber meets the road, and here a practical real-world outlook is better than a programmer's interest in detail and fine-tuning. In a connect-and-collaborate world, the most important thing is just to get on and do it.

## Author

Keith Harrison-Broninski has been regarded as an IT and business thought leader since publication of his book "Human Interactions: The Heart And Soul Of Business Process Management" (Meghan-Kiffer Press, 2005 - "a must read for Process Professionals and Systems Analysts alike", BPM Group). Building on 20 years of research and insights from varied disciplines, his theory of Human Interaction Management (HIM) provides a new way to describe and support collaborative human work.

Conference organizers around the world regularly invite Keith to give keynote lectures to business, IT and academic audiences at national conferences, most recently in Poland, India, the Netherlands, the UK, Finland and Portugal.

Keith is CTO of Role Modellers, whose mission is to develop understanding and support of human-driven processes - the field that Keith has pioneered. Role Modellers' software product, HumanEdj, leads the industry in computerized support for innovative, collaborative human work. Visit [humanedj.com](http://humanedj.com) to try online or download. HumanEdj is free for personal or small-scale use.

Keith stays active as a business consultant and software architect, via which activities he continues to refine and extend HIM theory.

More information about Keith and his work is available online (<http://keith.harrison-broninski.info>).

## BPTrends LinkedIn Discussion Group

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