

Working Smarter through Workscaping

By Jay Cross, May 2010

DRAFT

This is a work in progress. I'd love to receive your thoughts and guidance.

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Working smarter is the key to sustainability and perpetual improvement. Knowledge work and learning to work smarter are becoming indistinguishable. The accelerating rate of change in business forces everyone in every organization to make a choice: learn while you work or become obsolete.

The infrastructure for working smarter is called a *workscape*. It's not a separate function so much as another way of looking at how we organize work. *Workscaping* helps people grow so that their organizations may prosper. *Workscapes* are pervasive. They are certainly not lodged in a training department. In fact, they make the training department obsolete.

Organizations must stop thinking of learning as something separate from work. The further we get into the Knowledge Age, the greater the convergence of working and learning. In many cases, they are already one and the same.



Workers in a *workscape* learn by solving problems, coming up with fresh thinking, and collaborating with colleagues. They don't learn *about* these things; they learn to *do* them.

The *workscape* is the aspect of an organization where learning and development become never-ending processes rather than one-time events. A *workscape* is a learning ecology. The *workscaping* viewpoint helps knowledge workers become more effective professionally and fulfilled personally. A sound workscape environment empowers workers to be all that they can be.

Workscapes match flows of know-how with workers solving problems and getting things done. They are the aspect of workplace infrastructure that provides multiple means of solving problems, tapping collective wisdom, and collaborating with others.

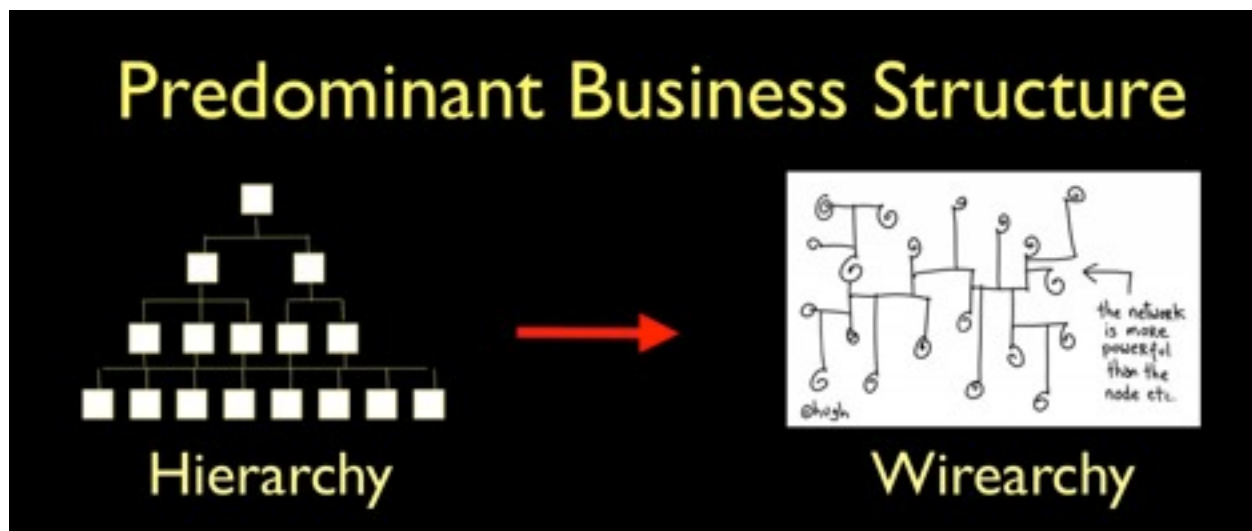
Workscapes are not a new structure but rather a holistic way of looking at and reformulating existing business infrastructure. They use the same networks and social media as the business itself, but technology is never the most important part of this.

Foremost are people, their motivations, emotions, attitudes, roles, their enthusiasm or lack thereof, and their innate desire to excel. Technology, be it web

2.0 or instructional design, social psychology, marketing, or intelligent systems, only supports what we're helping people to accomplish.

Got the idea? Okay, I'm going to stop putting workscape in *italics*. Think of worksapes as an inevitable part of every organization; worksapes are already there whether they are healthy and functional or not.

As business shucks off industrial-era command-and-control systems for agile, sense-and-respond networks, the structure of business adapts to its new environment.



Making progress in this network age requires know-how and the motivation to apply it. Let's look at each in turn.

Motivation

People are motivated to do things because they want to make progress¹ or to increase the scope of their repertoire to gain personal power. As Dan Pink² says, "It's about satisfying workers' desire for autonomy, which stimulates their 'innate capacity for self-direction.'" The best motivation is intrinsic wherein people do things for their own satisfaction, not external rewards. In fact, the carrot-and-stick method can often backfire such that the desired behavior may stop if the reward is withdrawn. Also, rewards tied to performance have the potential to change play into work.

¹ Amabile, T. *Creativity, Improvisation, and Organizations*, Harvard Business School Case Notes, 2009.

² Pink, D. 2010. *Drive, the Surprising Truth About What Motivates Us*

If you set high expectations of people, they usually live up to them. If you have low expectations of people, they live down to them. A person not trusted with the authority to do something can't take responsibility for doing it. 'It's not my department.' A person authorized and trusted to take responsibility cannot help but do so.

As Will Herzberg³, "the father of motivation theory," pointed out years ago, workers are motivated by achievement, recognition, the work itself, responsibility, promotion, and growth. This innate desire to do well can be hindered by obstacles that reduce motivation: lack of respect, poor working conditions, perceived unfairness, low pay, lack of job security, and poor relationship with supervisor.

Instructional design pioneer Robert Mager⁴ proposed a manner of determining whether a roadblock was inadequate knowledge or lack of motivation. Hold a gun to her head. If she does what you ask, she has the requisite knowledge; you're grappling with a motivation problem.

Sources of knowhow

My class at Harvard Business School has the distinction of being the last not allowed to bring portable calculators to exams. (A Bowmar 4-function calculator cost \$99, a sum that kept many of us from acquiring one.) I got through by doing discounted cash now with a slide rule.



Everyone has several calculators today. They are giveaways. There's probably one in your phone. All of which makes it irrelevant to learn long division, how to take cube roots, or logarithms. Why bother? That's yesterday's know-how.

Robert Kelley at Carnegie Mellon discovered that whereas in 1986 we carried 75% of what we need to know to do our jobs in our heads, by 2006 our brains contained only about 8-10% of what we needed to know. The rest is stored in our "outboard brains" -- our laptops or, increasingly, our smart phones.

³ Herzberg, W. 1968. *One More Time, How Do You Motivate Employees?* Harvard Business Review

⁴ Mager, R. 1970. *Analyzing Performance Problems. Or You Really Oughta Wanna.* Fearon Publishers

Once I had to learn most of the things required to do my job; now I need to know where to retrieve them. I search or ask people when I need to know. If I have a good network of savvy colleagues, I can ask them for advice (“social search”). “I store knowledge in my friends⁵.”

Instructional designers once designed instruction. Now they must make the tradeoff of putting knowledge in the worker's head (learning) or putting it in an outboard brain (performance support). Among the options available to them:

Formal	In between	Informal
Instructor-led class Workshop Video ILT Schooling Curriculum	Mentoring Conferences Simulations Interactive webinars Performance support YouTube Podcasts Books Storytelling	Hallway conversation Profiles/locators Social networking Trial & error Search Observation Asking questions Job shadowing/rotation Collaboration Community Study group Web jam Feeds Wikis, blogs, tweets Social bookmarking Unconferences

Searching and asking questions work best with explicit information, things that could be written down.

The subtle information that cannot be pinned down in simple sentences, for example, the emotions and nuances that make or break a sale, is tougher to transfer because “wisdom can't be told⁶.” People acquire this implicit knowledge

⁵ Karen Stephenson, as quoted by Downes <http://www.downes.ca/cgi-bin/page.cgi?post-44607>

⁶ Harvard professor Charles I. Gregg. 1970. <http://www.aacu.org/peerreview/lpr-wiOSlprwi05realitycheck.cfm>

through observing others, collaboration, and lengthy trial and error. Like blindfolded zen archery⁷, mastery sometimes takes years.

Or course, many times we have already learned a skill through hands-on experience. Today experiential learning can be accelerated through simulation, virtual worlds, and role playing.

	Formal	Informal
Control	Top-down	Laissez-faire
Delivery	Push	Pull
Duration	Hours, days, weeks	Minutes
Locus	Apart from work	Embedded in work
Author	Instructional designer, SME	Individual, the learner
Time to develop	Months, weeks	Minutes
When?	In advance	At time of need
What?	Know	Become

In the increasingly complex world we inhabit, we often confront novel situations. This requires us to innovate and to explore new ways of doing things. Innovation results when we mash up ideas, for example applying a rule of thumb from one discipline in an entirely different field.

Many organizations pay lip service to informal learning. They've started a few blogs or set up a wiki. Someone in IT is investigating social networking software. In reality, they are doing less with social learning than the average teenager. Developing a profitable workscape need not be incremental; you need not go through years of process to put things in place.

⁷ Herrigel, E and Suzuki, D. 1953. *Zen and the Art of Archery*

Our vision

Progress = leapfrog to end-state



He who hesitates is lost. The social and informal learning training is leaving the station. The driver is not the potential for improving the learning and development function, though that will undoubtedly result. The overall environment of business is changing and if the learning function does not change in parallel, it will become hopelessly out of sync with the needs of the enterprise.

So far, we've addressed motivation and know-how. Longer term, there's more to it than that. In addition to learning about things, people need to *become* professionals.

Professional Development

Long-term professional development often involves working and growing with peers.

The book *Kitchen Confidential*⁸ by Anthony Bourdain describes how he became a professional chef and how he continues to support the community of professional chefs. No one issues membership cards to professional chefs but they are not difficult to recognize. They wear funny looking hats and white tunics. They carry a set of knives that no one else is allowed to touch. Their fingers bear scars from calling it too close with those knives.

⁸ Bourdain, A. 2001. *Kitchen Confidential*. Harper Perennial

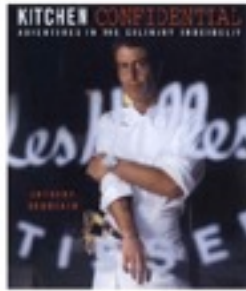
When chefs travel, they meet with other chefs. They eat together. They share techniques. Were it not for this sharing, we would not enjoy the broad, international array of foods on our tables (because chefs shared their sources and uses of exotic ingredients). When a top chef wants to move to a new job in a particular location, he tells a few chefs, the grapevine spreads the word, and within a week he has several job offers.

In the book, Bourdain describes starting out as a dishwasher in a restaurant on Cape Cod. Then he lands a job as a fry cook. From that point on, the chef running the kitchen he's working in is looking out for the newcomer's career. When will the kitchen worker be prepared to advance from washing lettuce to making salads? What does she need to know to advance to pastry chef? How can the chef help the dessert chef advance to sous chef? Good chefs take developing their staff very seriously. They see that their apprentices learn to create satisfying yet economical food. They improve what comes out of their kitchen by insuring they have a tip-top staff.

Chef



Anthony Bourdain



Anthony Bourdain decided he needed to accelerate his development so he attended the Culinary Institute of America for formal training. This enabled him to understand the interrelationships of ingredients and cooking and customers. The

curriculum at CIA taught him frameworks for various cuisines; he learned practices that would have taken years to learn on the job. And indeed, when Bourdain went back to cooking, he rapidly advanced up the ladder to become a chef.

Chefs are a community of like-minded individuals who identify with one another, advance the practice of their profession, and help new entrants join the profession.

Ten years ago, the common wisdom was that you could not establish a community of practice. If you found one that was working, the best you could do was to nurture it. It was like truffles. They grow wild. You want truffles, you put a pig or well-trained dog on a leash and encourage it to dig around the roots of oak trees in southern France or northern Italy.

The authorities were wrong on both counts. Half the world's truffles are cultivated on truffle plantations in Spain. Thousands of corporations have established thriving communities of practice that advance both the careers of their members and their shared body of knowledge.

Knowing the tricks of a trade does not make you a professional.

Beyond acquiring know-how, a professional hangs out with other professionals, builds relationships with others in the profession, and contributes to the collective wisdom of the profession. Most importantly, the professional knows deep inside that she has joined the profession.

The cook becomes a chef when she *feels* she's a chef and is comfortable helping others become chefs, too. Professional firefighters, insurance salespeople, plumbers, accountants, and architects don't just master subject matter; they become members of their profession.

How does one become a professional?

Professionals learn from one another *on purpose*. They learn from watching other professionals, from experimentation, and through following the advice of mentors. In time, they pay back the community by shifting from “what's known” to “what's next.”

Experience is the best teacher. You can't become a chef without working and learning in a kitchen.

Many professionals accelerate the rate at which they gain experience by enrolling in formal courses. Formal learning, where an outside authority chooses the subject matter, is a great way to see the big picture of a new field, master its concepts, get to know the ropes, and learn to talk the talk. Mind you, formal learning doesn't teach everything. No chef has every recipe in her head; that's why she has cookbooks.

How do workers learn to do their jobs?

Most people figure out how to do their jobs from the people they work with. They ask questions, they try things out, they ask for help, they tap into the grapevine, they snoop, they copy the behavior of people who seem to be doing things right. Anthropologists who have studied workplace behavior tell us this “learning at the school of hard knocks” is four times more important in developing talent than training in workshops and classrooms.

Learning is social; people always learn from one another. They have many, many times more contact with co-workers than with instructors, so it shouldn't come as a surprise that the workplace is where workers figure out what works.

While at first it seems haphazard, this informal learning is generally more effective than what goes on in organized workshops and classes. Why?

Rather than getting ready to deal with a situation that may or may not occur, impromptu learners figure out the minimum amount of information that they need to solve an immediate problem with a just-in-time solution before moving on to the next immediate problem. Workers remember things they choose better than things instructors tell them to learn. They trust their peers more than instructors. Perhaps most importantly, self-motivated workers apply what they've learned immediately. When humans learn something and don't apply it, they forget their lessons before they have an opportunity to use them. Not only that, but people learn better in five-minute chunks than from one-hour sessions.

Strangely, this self-directed problem-solving flies under the radar in most organizations, particularly because their strongest performers are so gifted at doing it. The high performers get the job done well but rarely do their managers ask them how they do it. Corporations invest in training and workshops and put nothing into improving the impromptu side. They also concentrate on novices, leaving experienced workers - the high performers - to fend for themselves. Why

do corporations invest in the areas where it does them the least good? I blame schooling.

You *can* teach old dogs new tricks. They just don't learn them in school. With the workforce we'll have for the next decade, we better get good at working with the older dogs.

What's wrong with most training? It's just like school.⁹

School is not a very effective way to learn things. I know, that sounds blasphemous. That's because for sixteen or more years, you were indoctrinated. What's wrong with school? Lots.

- You forget most of what you learn before you have the opportunity to use it. Human memory, if not reinforced, decays at an exponential rate. That's why you no longer remember it after taking the test¹⁰.
- You don't get to choose what to learn; you often deem what you're studying to be irrelevant.
- School bears little relation to the greater world outside their walls.
- School is based on the negative assumption that you are deficient in some way, something no one wants to hear.
- School forces you to learn from an authority; you have much more faith in your peers.
- School focuses on individuals; success in real life depends largely on groups.
- School was designed for socialization and conformity; this stifles creativity, innovation, and initiative.
- School is walled off from the real world, making it impossible to experience and learn from reality.
- School teaches people to answer; it fails to teach them to question.
- Early schooling is impersonal: everyone studies the same subjects.

⁹ Roger Schank

¹⁰ Ebbinghaus, H. (1885) *Oberdas Gedachtnis*

- Traditional college curricula was designed to prepare students to become professors or clergy, not, ahem, productive workers.
- School assumes pupils graduate; learning never ends.
- Grades, the measure of performance, are related to nothing outside of school. Honor roll students and those who almost fail are equally likely to be happy, rich, or successful. It would be difficult to find a more random variable.

Times have changed. The industrial age is ending; the network era is upon us. With everything becoming connected to everything else, the business world has become complex and the future, unpredictable. Relationships have become more important than individuals. Value flows to intangibles. Networks grow denser, cycle time speeds up, and everything goes faster, faster, faster. Scientist Ray Kurzweil¹¹ says the 21st century won't contain a hundred 20th century years; it will contain 20,000 of them!

Classroom	Workspace
apart from work	embedded in work
training, push	learning, pull
programs	platform
piecemeal	holistic
events	processes
static	fluid
know things	work smarter

Formal learning in school can work well when the answer is known and unchanging. That's rarely the reality we live in. The world has become more complex, the answers more negotiated and emergent. Schools must prepare people to adapt, not to simply go through the motions.

¹¹ Kurzweil, R. 2006. *The Singularity is Near*. Penguin

School was never an efficient way to learn; it did a decent job of enforcing social control. In the industrial age, schools adopted the practices of assembly lines and Taylorism. Eliminate surprises. Embrace mass production. One size fits all. Times have changed. Traditional schooling is becoming counter-productive.¹²

It used to be the bottom of the class that dropped out; now the smart kids drop out. School is irrelevant and boring.

This is not a good model for corporations to copy, yet they do. Old habits die hard.

What we are dealing with here is more than traditional learning. *Learning* is generally defined as the acquisition of skills or knowledge. That misses the trade-off of learning and performance support. Furthermore, organizations need more than learning: they need results. Learning is not enough; we want action.

The word *learning* has baggage. Mention learning to an executive and you can almost see them think *schooling*. Schooling, eh? That was not very effective. I'm not buying it. This is why I talk about working smarter by tapping into collaborative knowledge. I don't run into many people who don't want to work smarter.

¹² See John Taylor Gatto's *Underground History of American Education* at www.johntaylorgatto.com

A platform for working smarter

Back in the latter half of the twentieth century, a period I call the Golden Age of Training, corporations developed and delivered training programs. These programs were rigid events that took months to develop, days to deliver and months more to revise later, if necessary.

Formal training programs cannot keep pace with the ever-changing present, other than dealing with a few fundamentals that remain intact. For example, the way that police officers are expected to discharge their weapons safely and effectively may be a fundamental issue worthy of formal training in a controlled environment with lots of practice and certification required. However, the types of weapons they use and the circumstances in which they use them may change more rapidly and require other types of ad hoc, informal learning on the job or in simulations in order to stay current.

Today we need environments that simplify and encourage working smarter.¹³ This is where workscapes come in. Workscapes are to work as ecosystems are to events in nature. Pollution gums up the entire works. The Green movement and workscaping deal with impacts on whole systems.

We can encourage collaboration, problem-solving, and continuous improvement in a variety of ways:

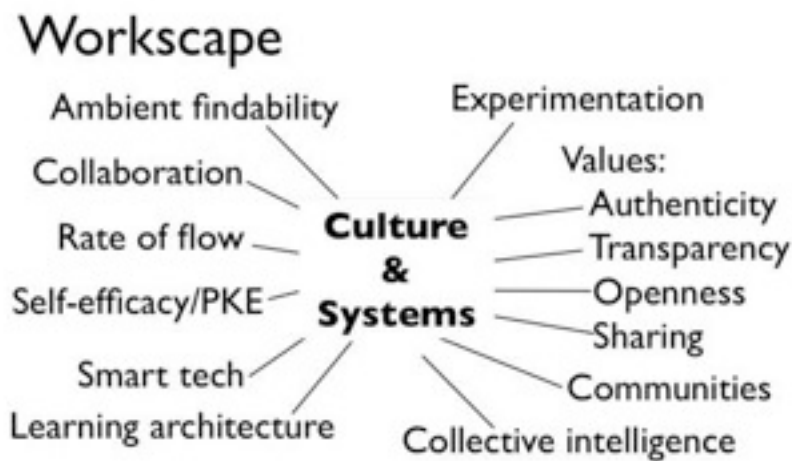


¹³ See Jay Cross, 2010, *Working Smarter* at jaycross.com

- Focus on helping high performers and old hands work smarter; novices aren't the only workers who need to learn
- Set up conversation nooks and put wi-fi in the cafeteria
- Do not punish people for failed experiments (if you never fail, you're not innovating)
- Create a network that enables people to locate who knows what
- Apply the 80/20 rule to select critical functions and seed communities of practice around them
- Trust people to manage their own learning and development
- Make mentoring and coaching part of everyone's job
- Use information technology to pull knowledge out of individuals and file cabinet, making it available to all
- Encourage people to narrate their work, documenting what they do to share with others
- Root out information hoarding; make sharing the norm (Some companies fire hoarders)
- Use social network analysis to locate and break bottlenecks
- Provide workers with smart phones, modern PCs, and internet access
- Seek opportunities to help customers, partners, temporary workers, alumni, and everyone else who works with the company work smarter
- Set up wikis and online workspaces with collaborative, accessible documents to avoid the proliferation of versions and confusion over what's current
- Look for opportunities to reduce cycle time: the world's not going any slower. Instant messenger, Twitter clones, podcasts
- Avoid duplication of effort in keeping up with news and research by providing shared information flows
- Reduce costs and increase relevance by replacing formal training programs with user-generated content

- Where possible, substitute self-service and peer learning for workshops
- Timeliness trumps perfection. Use amateur video and blogs to distribute information while it's still fresh
- Adopt best principles to outshine your organization's peers
- Make sharing and collaboration your system's default settings

Doing things at the workscape level enables you to improve the overall system instead of mucking about with individual programs.



Envisioning the workscape is analogous to the meta-learning view, which I've described before as “the view from the balcony” or “looking down from the helicopter.” When you take in the entire vista, doing things to improve conversation, e.g. putting leather sofas in the hallways and wi-fi in the cafeteria, has lasting, systemic effects.

Payoff

Most corporate functions have been streamlined, re-engineered, fish boned , TQM'd, sigma'd, disintermediated, and squeezed until there's no slack left to cut.

Optimizing the workscape, on the other hand, is virgin territory. Simple instances of working smarter by sharing information in real time or making professional development self-service can throw millions of dollars in savings to the bottom line, for example:

- Twitter-like information sharing saves wind turbine company \$3 to \$5 million annually
- Free wiki becomes the go-to source of corporate information for 20,000 workers, eliminating \$20 million a year in duplicate effort.
- Self-service FAQ cuts length of customer calls by 10%, improving service while shaving \$3 million off payroll for temporary workers.
- In-house subscriptions to research findings saves 4,000 systems engineers two hours/week, freeing up 8,000 billable hours, expanding capacity by more than \$25 million/year.
- A major consumer goods company has outsourced 50% of its R&D to customers, saving on staff and increasing innovation.
- A national telecommunications firm used performance support to reduce the rate of order entry errors from 30% to 6% (an 80% reduction) in 6 months.
- 3,000 communities of practice embedded in a major manufacturing company have generated more than \$75 million in savings.
- More than 2,000 employees of Best Buy have provided more than 20,000 answers to customer queries using Twitter.
- 7,000 workers at a major insurance company are sharing information in near-real time via Twitter.

What can you do to improve the quality of your workscape?

Start *workscaping* (yes, it's also a verb) by:

- Legitimizing informal learning in your organization
- Recognizing that learning is the work and the work is learning
- Fostering trust, collaboration, and connecting with others
- Clearing out obstacles to conversation, including time and space
- Tolerating -- make that praising -- failed experiments
- Respecting the unorthodox, the surprise, the contrarian
- Helping workers learn how to (earn

- Exploiting the web and the democratization of the workforce
- Relentlessly seeking innovation

Your organization already has a workscape. If you haven't nurtured it, opportunity is passing you by.

Appreciation

My heartfelt appreciation goes to the members of the typo squad who reviewed and vastly improved earlier drafts of this paper:

Tanya Marwitz, Learning Consultant, Service Canada College

Janet Leaan Efron, Four Rivers Group



About Internet Time Alliance

We help organizations make things happen better and faster through wirearchy and workscapes. You just read about workscapes; wirearchy is a dynamic two-way flow of power and authority, based on knowledge, trust, credibility and a focus on results, enabled by interconnected people and technology.

The world has grown complex. Augmenting human intelligence draws upon interface design, neuroscience, organizational development, social networking, experiential learning, cognitive science, collaborative software, and scenario planning. We help companies bring these disciplines together to optimize performance.

We can help your organization prosper with networking, performance support, and collaborative intelligence. Together, we will create a workplace that makes it easier for employees, partners, and customers to acquire skills and get things done.

Many corporate advisers know business; many know the web; and many understand how organizations become smarter. Internet Time Alliance understands all three.

Internet Time Alliance is six can-do practitioners with more than a century of experience managing projects, designing interventions, improving service, increasing sales, and boosting profits.

We've probably seen, explored, and used any approach to organizational and individual development you've ever been exposed to. We are web-savvy. We know what works and what doesn't.

Our approach is personal. We have no junior interns on our team. You work with one of us each and every time. Call on us for well-reasoned opinion or to act as your project "dream team." Your first call is on us.

<http://intertimealliance.com>



Jay Cross, Jane Hart, Jon Husband, Harold Jarche, Charles Jennings, and Clark Quinn form our guild. We work individually or in teams, depending on your need.

Jay Cross champions informal learning, web 2.0, and systems thinking. His calling is to help business people improve their performance on the job and satisfaction in life. He is the author of *Informal Learning: Rediscovering the Natural Pathways that Inspire Innovation and Performance*. His insights and stories will expand your perspective and enliven your meetings.

Jane Hart is founder of the Centre for Learning and Performance Technologies, where she keeps track of existing and emerging technologies. Jane has recently implemented more than a dozen social learning environments in Europe – in universities, non-profit and profit making organizations.

Jon Husband coined the term **wirearchy**. He was a Senior Principal with the Hay Group, specializing in emergent strategy, organizational design, organizational effectiveness and organizational change. He pays attention to the impacts of interconnected people and continuous flows of information on organizational structure and leadership and management capability.

Harold Jarche helps organizations make sense of the Web for community building, collaboration, professional development and communication. Harold is an independent consultant with 25 years of experience in the public and private sectors. Harold's popular blog has provided a wealth of information for more than six years. He holds degrees from the Royal Military College of Canada and the University of New Brunswick.

Charles Jennings served as CLO of Reuters and Thomson Reuters for eight years, and knows organizational learning. He has deep experience in both the business and learning practitioner sides of planning and implementing world-class performance solutions for organizations.

Clark Quinn is recognized as a leading advocate of design that respects how people really learn, courtesy of a PhD in applied cognitive science at UCSD. A respected speaker and writer, he's been responsible for numerous innovative designs that integrate learner, learning, and user experience into successful performance solutions.