



31 October 2023

## Data as language: good for business and people

### Special note

There have been two blog postings in October. This is the second.

### Aim of blog

The aim of this blog is to look at the relationship between data, high performance, and social wellbeing.

### Data as language

At the first annual meeting of the Society for Organizational Learning Humberto Maturana explained that language is the recursive coordination of actions.

Language is not abstract. Language has the concreteness of doings, it is the coordination of doings. [1]

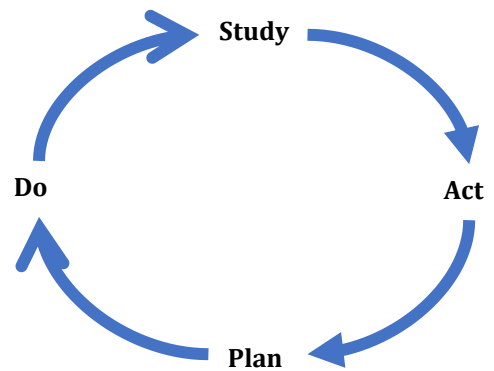
The Swiss psychologist who inspired Arie de Gues, Jean Piaget, wrote of knowledge as the general coordinations of individual and collective actions[2]. Language and knowledge as inextricably linked. For organizations interested in high performance and social well-being this is fundamental because the recursive coordinations of collective actions in dynamic social networks is the source of all value creation

## Data and recursion

In 1928, Walter Shewhart and WE Deming transformed our approach to quality. Once thought to be a linear process of inspection determining whether specifications were met, Shewhart and Deming described a *recursive* learning process later described as the plan-do-check-act cycle and later by Deming as a plan-do-study-act cycle of continuous improvement.

Once plans are made by organization leaders, workers begin to do the planned work, taking time to study

whether their actions create value triggering the continuous improvement cycle coordinating individual and collective actions. If studies validate the planned work creates value – the plan is sustained and if the studies show the planned work does not create value, plans change, and improvements are made. This is a recursive cycle, Deming described as more of a spiral than a closed circle [3].



## Data criteria

Data is knowledge and guides individual and collective coordination of actions. To do so, data must meet simple criteria. Simple, but, depending on the culture of the workplace, sometimes difficult to implement.

Data must be *timely, actionable, relevant, and accessible*.

1. **Timely** data is data that can be used in our daily living to take effective action.

2. **Actionable** data improves performance while data without action can be a distraction and misleading, triggering ineffective actions resulting in negative human and social capital. The cost of misleading data is enormous.
3. To be actionable, data must be **relevant**. When we think about our conversations in the workplace, we can see that many conversations are not related to individual and collective performance, despite our intentions. Relevant data, needs no explanation, its value is in being timely and actionable.
4. Of course, without having **access** to the data, actions can not be taken. Openness and transparency are essential qualities of a data-based performance culture.

### Data's systemic architecture.

Besides establishing the criteria for data, leaders need to link daily data to the purpose of the organization. This is done following a simple process following two questions. The first question is "What must be accomplished?" and the second, "How will we know we have achieved our accomplishment?" Both questions are applied at different levels of organizational performance. In 1980, people with developmental disabilities were put into state hospitals and subject to unimaginable abuse and neglect. I opened a not-for-profit business, and our purpose was to employ people with developmental disabilities. Behind our purpose was a logic that if we proved they could be productive citizens we could make a case for closing state hospitals and using the savings to start community-based employment services. Regarding the purpose, what needed to be accomplished was employing people with developmental disabilities and how we knew we achieved this accomplishment was our monthly wage data. This was the first step in creating an accomplishment model linking our purpose and daily performance data.

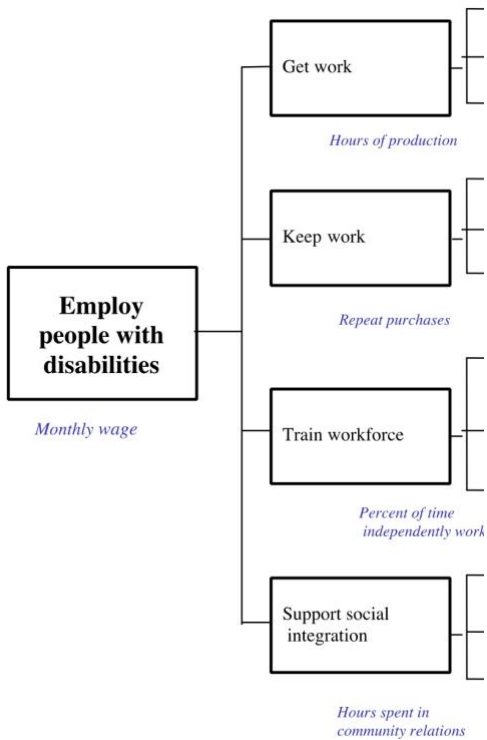


*Monthly wage*

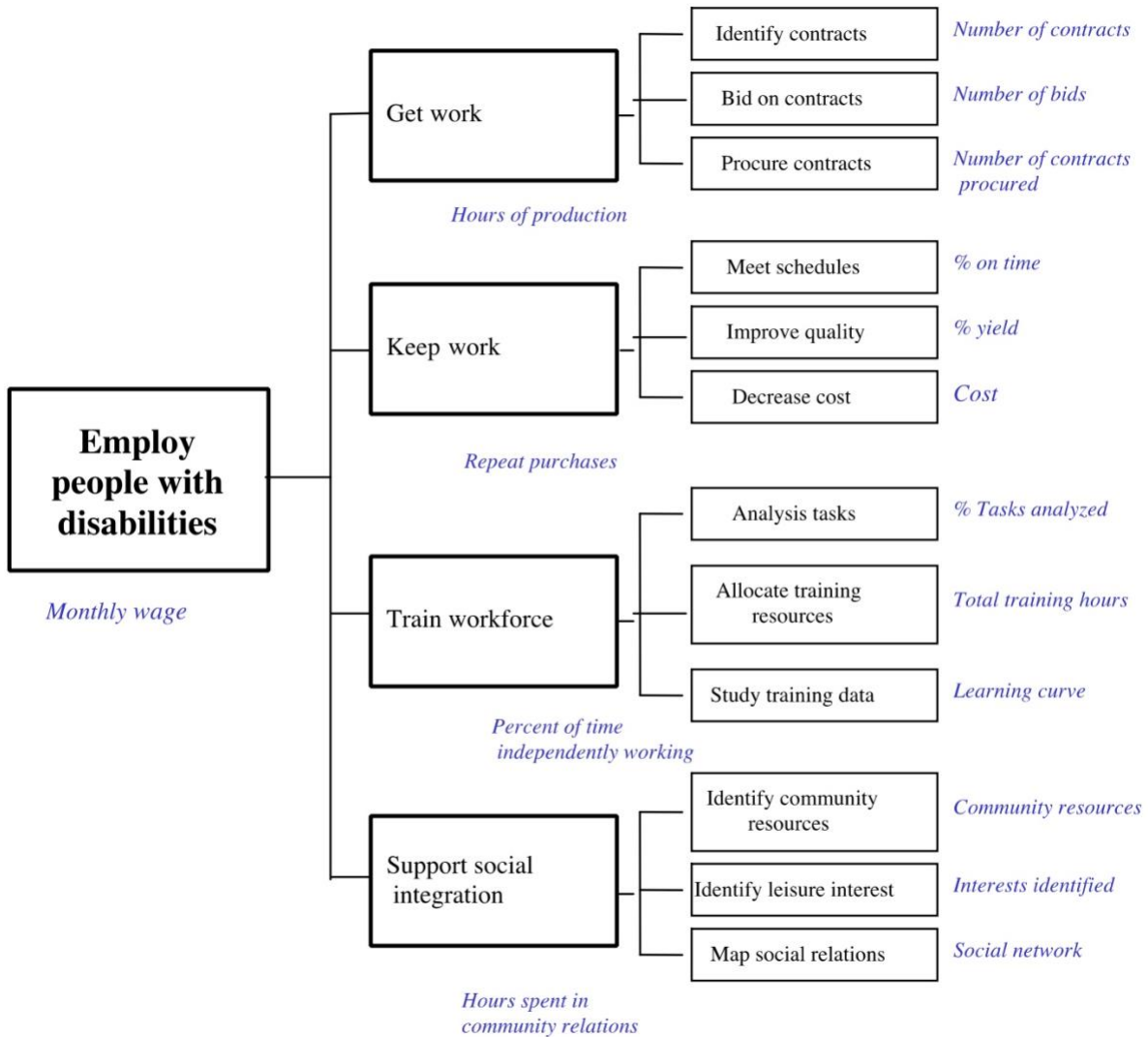
At the second level I asked, “What do we need to accomplish to achieve our purpose?” The answer was quite simple. I needed to achieve four measured accomplishments.

1. Get work.
2. Keep work.
3. Train the workforce.
4. Support social integration.

I then asked, “How will we know we have achieved these accomplishments?” and established the measure shown below.



Completing the accomplishment model, I asked “What needs to be accomplished for each of the four accomplishments?”, and “How will we know when we achieved each accomplishment?”



The accomplishment model is a systemic performance tool. The measure of our purpose was perpetual. At the second level, our measures for getting work, keeping work, training our workforce, and supporting their social integration were monthly measures. At the third level, our measures were daily and, using the Deming cycle, constantly improving. All measures were

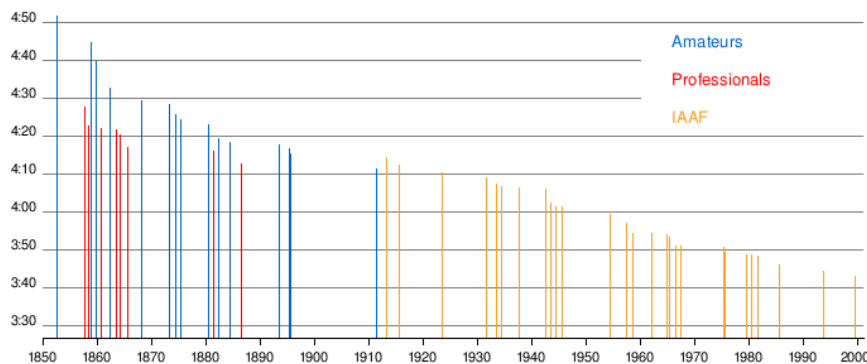
charted daily and publicly posted and reported [4, 5]. This system worked. Within a year of our opening, Oregon passed legislation closing state hospitals with the savings to be invested in community-based services [6].

## Making data-based decisions.

How does an organization achieve high performance? There are two paths and one answer to this question to be found in the organizations culture. Decisions are either based on data or based on opinions. Opinionated decision making occurs in management hierarchies while data-based decision making occurs at all levels of the organization in the daily coordination of collective actions. From an organizational learning perspective, workers learn that opinions and judgements of those in authority do not always lead to high performance nor social wellbeing, while data-based decision-making leads to high performance and social wellbeing. This is nothing to be learned intellectually but an feeling workers have at work.

## Data at work: Generating a culture of high performance and social wellbeing.

Our global passion for sports teaches us that using data to improve performance is vital to an individual or teams' success. Take for example, the history of men running mile events.



Since the inception of the International Association of Athletics Federations men running the mile have improved from 4:10 minute miles to running a bit over 3:40 miles.

The mile run data shows high performance in the global running community. But, how does data connect to our wellbeing?

1. **Data creates equity.** Staying with the domain of sports we know that Jackie Robinson was the first African American to play in major league baseball. It wasn't his African descent that enabled him to cross baseballs' "color line". It was his performance data. A year before he started with the Brooklyn Dodger's he played 124 games with the Montreal Royals batting .349 with 25 doubles, eight triples, three home runs, 66 RBIs and 40 stolen bases. When data-based decision on a daily basis includes all workers we learn that data creates social equity in the workplace culture.
2. **Data creates accountability.** Data that is actionable, timely, relevant, and accessible creates accountability, or the workers responsibility for their individual and collective actions. Without data, accountability becomes an often contentious.
3. **Data improves productivity.** Productivity is measured by the creation of value over time. When a workplace culture uses data-based decision making on a daily basis workers are recognized for making a difference and coming from their peers this is a powerful reward. Data improves productivity because it decreases the time it takes to create value by rewarding value creating actions.

4. **Data builds confidence.** Canadian psychologist, Albert Bandura explains how our success is dependent on our confidence in our abilities. Group success is dependent upon the groups' confidence in their collective abilities. Accomplishment data boosts our confidence and continuous improvement data builds individual and group confidence that their performance can constantly meet the demands of the organization. His theory of self-efficacy performance accomplishments are a principal source of efficacy [7]
  
5. **Data and freedom.** When I ask workers how they work well together the most common answer is they were free to do so and they were free to do so because they were not under "micro-management". This is interesting and begs the question. If workers are free to contribute to organizational performance, how do we know this is of value for the organization? The answer is in the data. Data-based decision making teaches us that workers performance is exponentially better when workers are free to contribute value and have data measuring their outcomes. Performance deteriorates when worker performance is assumed to improve in industrial era command-control management systems.

In a data-based decision-making culture we know when we are generating high performance and when we know we are generating high performance we know we are working well together. With decades of research, the most recent being Hewlett-Packard's Work Relationship Index [8], we know knowledge workers have an unhealthy relationship with work. The relationship is so unhealthy that it can create unnecessary heart disease and ill mental health [9]. Using



accomplishment data will bring about what HP's CEO calls for in his announcement of HP's findings.

I believe there is a huge opportunity to strengthen the world's relationship with work in ways that are both good for people and good for business. And it's critically important that we do – because the world's relationship with work today is strained.[10]

## Citations

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