Feedback, Synchronization, and Tracking Quickly on Our Goals
Avoiding going off track and out of whack

Abstract: How do ensure that the organizations of which we are part succeed? Fast, frequent, and often fine-grained feedback to keep our collective on track and to keep our individual efforts harmonized with each other.

Keeping in Harmony: Our enterprises are large, complex (e.g., many people with myriad specialties working with sophisticated technologies), and dynamic (the pieces constantly in motion relative to each other. Internal feedback keeps the parts synchronized well in a harmonious whole. Without it, disarray. Everyone seemingly goes off in their own direction, pursuing discordant goals, leaving delays, discrepancies, defects, and disappointment in their wake.

Keeping on track: The whole is in motion relative to its competitive environment (e.g., what we need to accomplish has to be discovered and rediscovered, and enablers and challenges are continuously changing). With continuous feedback of how we are doing relative to what the market wants, we have chance of closing on opportunities successfully. (Think agile with its MVP sprints or the lean startup and lean innovation emphasis to 'test visions continuously'). These ideas are developed, in a foreword I wrote for a new book, *Flow Systems*.

Thanks to colleagues John Carrier and Gene Kim (author of *DevOps Handbook*, *Unicorn Project*, *The Phoenix Project*, etc.) for discussion that have informed this thinking.

Control theorists will reduce their concerns to one: cycle time. Get your detection and adaptation times within the frequencies of the environment in which you're operating, and you can thrive. Conversely, if your detection and adaptation times are too slow, you'll be overtaken by the situations you're in, sometimes with terrible consequences.

That getting adaptations faster and ensuring they're better targeted is self-evident, this being written during the throes of the novel-corona virus pandemic. This disease, compared to its compatriots SARS and MERS has spread farther, faster, and with more devastating impact. To scale that statement, SARS was measured by infections in the thousands and deaths in the hundreds. Covid-19's impact is measured by the millions infected and the hundreds of thousands killed.

Why such differences in morbidity and mortality? Cycle time. On the one hand, Covid-19 is fast. Compared to even the early 2000s, disease can move further faster because of speed and interconnectedness of transportation, so we have less time to detect and react. And once this

virus lands someplace and gets a toehold in one host, it might be infectious quicker than its peers (the definitive science is still being developed), so it can spread fast and far.

On the flip side, society is slow. For a host of bureaucratic and political reasons, local authorities in Wuhan were plodding in sounding the alarm (though local authorities weren't necessarily faster with SARS about 20 years ago), and authorities elsewhere were slow to pay attention to the alarm. Measures to break transmission channels like limitations on flying, social distancing, masking, etc. that we now realize as necessary, seemed outlandish overreactions in the beginning. Making matters worse, it's just slow to develop tests (so we can know faster who should be isolated for a period and who needn't be) and slow too to develop vaccines and treatments (relative to the disease's progression).

That creates a predicament. We could ask the world to slow down, but it won't. Viruses will appear when they want to appear, and we've learned the enormous economic, social, and emotional costs of decelerating society. The alternative then is to figure out how to speed up, get our adaptation times within the cycle times of what is going on around us. Doing so means operating in situations that are increasingly non-linear and more complex (A doesn't connect to B which connects to C, and so forth. A connects to B and C and tau and rho, to several numbers, and to a variety of geometric shapes), situations which are also faster moving.

Orienting and acting in such environments means first keeping tightly aligned on our mission and purpose. Customer first. It might have been fine with simpler and slower moving systems to identify our organization's purpose once (and revalidate infrequently). That done, we were liberated to perform our roles, confident that so long as we continued, more or less, to do what we'd been doing, all would be fine.

No longer so. Who are our customers, what do they want, how can those needs be met…those questions keep recurring because today's answers are perishable. That creates a double challenge. If what we need to do keeps changing, then we have to keep reconfiguring the systems we use to anticipate, track, and meet those needs. But, those very systems will become increasingly complex and dynamic.

The term 'command and control' is often used to described management systems of the 50s, 60s, and 70s. I'm skeptical if there ever was perfect fidelity to the ideas, with some few people actually doing the thinking at the top and some many people actually following instructions at the bottom. We know that even when corporate leaders thought they were commanding and controlling, there were countless 'kluge' solutions being used on the shop floor, hence the emergence of the phrase "the hidden factory." In more authoritarian societies, the 'hidden factories' within organizations were overlaid with black markets for the economy as a whole.

Nevertheless, the notion of command and control (with its unofficial but absolutely necessary offset of local adaptation) might have been good enough at some time. Not today. Overwhelming is the evidence that companies and governments that stuck to such legacy approaches failed as everything around them sped up.

So, what's the alternative? Distributed leadership. And by this, the meaning is not everyone gets to do whatever the heck they want. That'd be chaotic. Rather, it means that everyone has a span of responsibility over which they have authority and resources to regularly detect aberration; conceive and test alternative solutions; and take corrective actions. With that combination of responsibility, authority, and rigor the component pieces of al larger system can retain their integrity and agility.

That's necessary, but insufficient. Also necessary is to ensure that the individual teams are continuously aligned and realigned into a team of teams. This means understanding the larger purpose of the system of which they are part (e.g., "customer first") and how their portion fits into the larger whole.

Organizations that pull off this triple helix trick of thinking about the complexity of their systems and the environment in which they're operating, distributing leadership to engage the collective intelligence and creativity of the organization, and building teams of teams so the whole is greater than the sum of the parts have good chance of keeping up and staying ahead. Those who don't…well, let's try not to be one of them.

With best wishes for success,

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