A NEW PARADIGM FOR COMPETITION: CLOCK SPEED

BUILD A “CLOCK SPEED” CULTURE TO COMPETE WITH DIGITAL DISRUPTORS

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Digital disruptors have been a force in business for a decade or more, but their collective impact is now reaching an inflection point. Even if the business models of digital disruptors don’t dislodge incumbents, they set the narrative, pinch margins and profits, reset consumer expectations, and change the terms of engagement. Eventually, value migrates (as evidenced by Amazon versus Walmart).

Apple’s move into payments marked an inflection point in financial services, alongside the digital-only players in financial management and “robo” advisory services. In telephony, Skype has radically changed expectations, as has Netflix in cable TV, Uber in local transportation, Airbnb in hotels, WarbyParker in eye glasses, Zappos in shoes, and Expedia, Kayak, and Orbitz in travel services. The list goes on and on.

But it is not just the slick consumer experience and product simplicity that creates disruption. It is also the relentless speed with which these disruptors bring change to market, test and learn and adapt, and respond to their customers. Disruptors have attuned their organizations to compete at high “clock speed” which in and of itself is becoming a competitive advantage and value proposition to customers.

In operating at high clock speed, digital disruptors go far beyond the mere acceleration of existing processes. They respond more quickly to consumers and new ideas. With an eye on the next four business designs, they adapt and evolve rapidly. They innovate faster, develop products faster, and react to data and customer behavior faster. Their learning loops are tighter. Their infrastructure, culture, and organizational processes are geared toward simplicity and flexibility. Digital disruptors are young, upstart, silicon superstars operating at clock speeds aiming to leave incumbents in the dust.

In this age of relentless and accelerating digital disruption, incumbents under fire need to increase their clock speed and get their organizations marching to the beat of a different drummer. Today, the amount you can win or lose – fast – is much greater than it was before. Efficiency gains from process simplification might measure 20 percent, whereas clock speed gains from daily (even hourly) improvements might measure 20X. That’s an order of magnitude higher – and an order of magnitude more difficult for incumbents to match. But, it’s possible and imperative for incumbents to protect their legacy assets as they change the way they organize and operate to achieve higher clock speed.

1 The term measures the speed with which a microprocessor executes instructions.
### Exhibit 1: Competing at clock speed: a checklist

<table>
<thead>
<tr>
<th></th>
<th>NORMAL</th>
<th>FAST</th>
<th>CLOCK SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT system</td>
<td>Legacy</td>
<td>Cloud</td>
<td>Plug-and-Play API</td>
</tr>
<tr>
<td>IT integration</td>
<td>Discreet</td>
<td>Integrated</td>
<td>Product-specific open source</td>
</tr>
<tr>
<td>Frequency of product releases</td>
<td>2x/3x per yr.</td>
<td>Monthly</td>
<td>Daily</td>
</tr>
<tr>
<td>Frequency of digital connection to customers</td>
<td>Rare</td>
<td>Occasional</td>
<td>Frequent</td>
</tr>
<tr>
<td>Organizational structure</td>
<td>Vertical</td>
<td>Horizontal</td>
<td>Recombinant agile teams</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>HR rules</td>
<td>Manager rules</td>
<td>Empowered individuals</td>
</tr>
<tr>
<td>Decision-making time</td>
<td>&lt; 100 hours</td>
<td>&lt; 1 day</td>
<td>&lt; 1 minute</td>
</tr>
<tr>
<td>Asset intensity</td>
<td>80%</td>
<td>50%</td>
<td>30%</td>
</tr>
<tr>
<td>% Engineers</td>
<td>&lt;5%</td>
<td>&gt;10%</td>
<td>30-50%</td>
</tr>
<tr>
<td>% Data scientists</td>
<td>&lt;5%</td>
<td>&gt;10%</td>
<td>20%</td>
</tr>
<tr>
<td>CEO vision horizon</td>
<td>Quarterly</td>
<td>3-5 years</td>
<td>10 years</td>
</tr>
</tbody>
</table>
WHAT IS CLOCK SPEED?

The classic solutions to gaining speed are process simplification, front-to-back integration, and shortcutting processes – doing what you did yesterday, except faster and more efficiently. But achieving high clock speed is very different. Clock speed is not just re-engineering, it is a whole organizational paradigm. Clock speed means engineering a new process that is inherently better. Clock speed means constant iteration, and the freedom to fail on the path to success. Clock speed means creating on the fly without the disruption of coordination, collaboration, and hierarchical decision making. Clock speed means moving from fast to instant, rejecting complexity for simplicity.

Digital disruptors also know that speed is more important than perfection. They have a bias toward action, but not just any action. They know that acceleration of old processes may mean speed, but not clock speed. Amazon, for example, has multiple websites operating simultaneously – and makes hourly changes based on consumer behavior.

A high clock speed mindset lives in the future, not the present. It assumes that what exists today has less value than what might happen tomorrow, or in five or 10 years. Why protect the core of your business if the core will slowly rot? Why not build for the future by anticipating where the industry is going, and assuming you will be competing against upstarts and incumbents from other value chains rather than today’s “neighbors”? Once you scenario-plan for the future, you can return to the present and react accordingly, and work in parallel to build the new within the old. Amazon built the Kindle – fast – because it anticipated that e-readers (from Sony et al.) would change consumer habits and upend the bookselling world. Amazon anticipated the future and was there, product in hand, to meet it.

Clock speed, in short, is about much more than acceleration – going faster and more efficiently. It is a proposition in itself, not just an execution capability. It’s about a whole-cloth reversal of long-accepted organizational fundamentals. Clock speed sets a new paradigm for competition in a digital world, spinning out spare, elegant products designed for consumer experience.
HOW TO RAMP UP YOUR CLOCK SPEED

Achieving high clock speed often requires counterintuitive management that reverses long-accepted paradigms:

• In the past, many organizations established centralized groups to promote cost cutting and efficiency. Executives must reverse that trend by recombining teams and creating agile, entrepreneurial pods to execute end-to-end – through and across organizational boundaries, and with accountability and empowerment far down the organization.

• In the past, many executives installed complicated end-to-end Oracle or SAP-type systems and it took between two and five years to rebuild an IT system that in turn remained static for another two to five years; now, the trend is to externalize IT, use someone else’s cloud, and build a new API every day, with a new front end to stay current in an “API economy.”

• In the past, executives focused on efficiency and lock-in contracts; now, they need to value speed, responsiveness, and change.

• In the past, organizations spent days reviewing customer applications and collecting evidence before opening an account; now, they can review data in minutes, predict behavior, and proactively reach out to customers.

• In the past, managers spent so much time managing they became disconnected from the day-to-day business; now, managers are doers who lead empowered employees in flat and simple organizations.

• In the past, companies spent months developing products; now, they need to think about minimum viable products that are co-designed with their customers, retraining employees to act without permission and letting the customer do the work.

There are six critical levers for incumbents to pull as they look to protect their legacy assets when ramping up their clock speed:

1. LEAN, AGILE ORGANIZATION
   Reintegrate to speed up decisions and execution

2. TWO-SPEED SYSTEMS
   Free what can be fast from the slow legacy

3. CULTURE OF EXPERIMENTATION
   Embrace and value imperfection

4. LET THE CUSTOMER DO THE WORK
   Put the customer in the driver’s seat

5. FOCUS ON THE CORE
   Create ecosystems for nimbleness

6. LEADERSHIP TO COMPETE
   Reset behaviors and values
Companies are tuned and trained to make thorough analyses – and develop compensating mechanisms (such as meetings to reach consensus) before making a decision. But clock speed requires you to speed decision making through multiple small decisions made daily, at all levels of the organization, rather than discussing big or radical changes for months. This will require a different level of talent and empowerment, and a different approach to governance and organization design. You need “tweeners” who sit between the business (because they understand it and get it fast) and IT (because they understand the tech). You need accepted content authorities that can provide credible counsel fast. You need leaders who are comfortable to govern on output rather than on input. And you need to rethink how you recombine your organization for end-to-end accountability and eliminate the complexity and drag inherent in matrixed organizations.

And very importantly, you need to (re-)train your people to work with agility, collaborate in action, and deal with ambiguity. When Capital One developed its “configurator” middleware to allow consumers to design their own cards, it pushed agile teams that went from a couple of pilots to revamping two-thirds of its internal IT system in 18 months – as they were also developing the consumer front end.

Comcast, under pressure from Netflix streaming and worried about Apple TV, built its X-1 streaming/two-way platform extremely fast. With a separate team operating outside its legacy system and with the freedom to experiment and fail, Comcast engineers quickly built the platform then back-integrated it into the legacy system. Now, new designs are developed to back-integrate from the start.

But think micro, not macro and rather than trying for a top to bottom reorganization, strive for constant improvement and speed in current processes (meetings, product launches), while also scrapping existing processes for unbounded experimentation (product development, time to value). Making small, practical improvements in multiple areas will likely pay for itself, unlike huge programs that require massive investment. Approach those decisions in a way that is inherently flexible, compartmentalized, modularized, and easy to change.
Inflexible IT can be a drag on creativity and speed. Integrating with an existing system can be time consuming. And it consumes big portions of your IT spend. For maximum speed on new projects, implement two-speed IT. Decouple old and new IT both organizationally and physically, and re-architect your systems with new mid-tiers and APIs.

Delayering – building “firebreaks” in your IT infrastructure – is an antidote that doesn’t require a whole-system changeover. When one part of the business decides to do something differently, it can swap out elements of processes and systems without having to change everything. De-layered architectures will allow you to quickly deploy plug-and-play modules, either your own or open source. This is a continuous investment that chips away on tightly coupled systems and flexibilizes your architecture over time. This speeds IT development by 30 percent, and allows 15 percent to 20 percent redeployment of IT budgets.

Correspondingly, accept the fact that not every part of your organization will run at clock speed, but those parts that do need a different structure. Develop a two-speed workforce, otherwise, you risk applying the right concept to the wrong areas.

For example, a bank won’t change its credit-rating models or rebrand without very careful consideration. An insurance company won’t change its underwriting process, but it probably should re-engineer its pricing and distribution model. When it comes to product development and time-to-market, clock speed is key to any market-facing interactions (such as financial robo advisors) or IT workarounds to a legacy system (such as doctors using iPads).

Consider different incentive systems. A midsize bank that was restructuring its core banking system offered the design team bonuses for hitting development milestones and bonuses for meeting “time to value” goals. This two-speed workforce will likely create internal tension, but to achieve clock speed you need to forge a different mindset. Conversely, that also means recognizing that the person who creates a new bank app is as important as the person responsible for the branch system. It’s quite likely that the new high-speed talent is a younger, digital native.
Management needs to build a culture that talks about and accepts failure, as a learning way station on the road to success. Governance is important because it controls access to resources and funding. Without governance that accepts risk and failure, a firm might have small pockets operating at clock speed, but will not scale the clock speed culture. The cultures and behaviors of fear must be overcome.

Even if you make some wrong decisions, you can easily overwrite them if you are in the mode of constant change and deployment. Executives need to get out of the way, and alter their approach from monitoring and control, to managing output over input. Performance management and incentive systems need to promote risk taking and protect the right kind of failing. Employees need to feel confident and empowered, with accountability to deliver, and have access to content authorities. Don’t look for consensus; trust your convictions and act. And be willing to live with regret.

The days of design/build/run are gone. The days of meetings and consensus are gone. You are running and testing as you are building. You are making changes on the fly based on reactions. You are not surveying customers because you might ask the wrong questions and customers might not know the answers; you are watching customers’ behavior and reactions. You embrace daily life in “Beta” mode.

Build, design, and launch in parallel, not sequentially. When you have a “minimum viable product” (and ideally two or three, as Apple did when developing the iPhone), test it, then enrich the design with the feedback. You are never finished designing or building – survival of the fittest speeds evolution. Iterate, iterate, iterate. Understand, learn, react, apply, change. Then repeat. Never accept projects that take longer than 12 to 16 weeks. Don’t set up programs that last two years. Force your team to break down work in small chunks. Rewire the brain to enter permanent listening/improvement mode. Your ability to detect what can be improved and react quickly is key to speeding the cycle of change and innovation.
Digitizing processes and giving the customer the tools to do the work can show dramatic impact on the P&L, and provide the funding for future enablement waves. But this is not about automating processes. It’s about combining data and insight with tools that empower the customer to run processes without you touching them. The result is a lean and nimble organization with clock speed in your customer’s hands.

In financial services, cashing checks was an early “proof point.” Smartphone camera entry accessed from any location saves the customer a trip to the bank, and saves the bank expensive manual processing and rework. For one bank, ruthless digitization has enabled it to reduce its 20-plus systems and databases into a single view on its customers, shrink its decision-making time from over 100 hours to less than a minute, and trim the time it takes to process a mortgage from 10 days to less than an hour.

In healthcare, attention is turning to digitizing physician-facing tasks, such as clinical documentation. Here, different legacy processes are served by a single digitized approach, as common datasets are required for billing, patient, and referrer communication, as well as safety and quality management. Sharing clinical information with patients and other caregivers, such as pharmacists, is automated and electronic. These new approaches result in significant cost savings in administration, increased clinician time devoted to patient care, and better patient outcomes.
Every business has a few core assets, but they are often hidden by a proliferation of products and management complexity. Find the 20 percent of assets that drive 80 percent of revenues to focus on core asset and competitive advantages, and strip away controls to simplify and let them flourish. Complexity inhibits speed.

Distinguish what parts of your IT system are “plumbing” and not a source of competitive advantage. Your general ledger, for example, needs to be right, but it’s not a source of competitive advantage. You can fine-tune inefficient financial systems, but that’s not a first-order fix to stay competitive. You might close a gap with mediocre players in the marketplace, but the cost to fix relative to the return isn’t particularly good.

High clock speed businesses have very low asset intensity, which is hard for incumbents to match. But you can externalize as much of the business as you can, by changing and leveraging external focuses. The Internet makes it easier than ever before. Let others do the work for you using new agile contracting that allows you to build and update your ecosystem rapidly. Deciding what you do in-house versus outside, what is core vs. non-core, is crucial to your clock speed – and success.

Developing your own data-analytic capability, for example, is much less important (and harder to differentiate on in-house) than figuring out how to use data in product development, or to improve customer experience. Externalize your data by moving more and more of your data to the cloud, and hire analytics firms to do the crunching, while you focus on rapid-fire decision making rather than managing IT. And deploy data algorithms to handle customer interactions – companies like Uber and AirBnB could not function without data algorithms that reduce asset intensity.

Invention is noble and copying is shameful – but invention is slow and copying is fast. Assess what exists and how it matches what you need. A French insurer did this with Nutmeg software – which solved 80 percent of its business problem – and within eight weeks had adapted and tested two new sales tools in different branches. The creative process required one discussion with the CEO; a small team of three worked daily to build out the product.
For digital natives, like Amazon or Uber, none of these principles are rocket science. They are part of digital natives’ DNA. For established incumbents, however, building a similar clock speed “rocket” is tough. To transition, companies need to retool their talent base to enable them to actually work in clock speed; and leaders need to retool their approach to management – embracing fast-paced change and uncertainty – to permit clock speed to flourish and produce.

Managers need a strategy to retune their organizations – to change the mindset, culture, and skill sets of their workforces. On a tech-transformation project, we estimate that over the next five years the company needs to “refresh” about 3,000 people – 25 percent of its workforce – to remain competitive. In most organizations, one-third of employees won’t buy the culture shift, one-third will get some part of it, and one-third will embrace it and drive the change. This may well mean instituting a two-speed workforce, which is something good leaders should embrace.

For incumbents competing against digital natives and “unicorns,” attracting and retaining talent is a key element. Even if organizations have the right culture and values, people and behaviors are the defining element. Young high achievers, in particular, are attracted by mission and social impact, making it mandatory for leadership to position their company as innovative, open and future-oriented. This is hard for incumbents, but not impossible. A legendary incumbent such as Goldman Sachs, for example, promotes itself as the most innovative in the field, an industry leader that is fast to react to new trends.

CEO leadership is crucial to developing a clock speed culture and giving managers the freedom to act as doers who lead empowered, agile teams. Leaders must set a compelling futuristic vision, be open to new ideas, adapt quickly, and accept and encourage different cultures in different parts of the organization. Above all, they must set the tone for which values and behaviors are acceptable and, just as importantly, those that are not. This needs to be underpinned by performance-management systems and may require external coaching in the transition process – permitting an infusion of talent to succeed against the organization’s natural (bureaucratic) instinct to reject them and maintain stability.
TOWARDS CLOCK SPEED

The urgency brought about by the inflection of digital disruption requires creation of an environment open to and capable of change and that breaks many current paradigms. Lumbering computer-age “kilohertz” speed won’t keep up with disruptors’ Internet 2.0 “gigahertz” speed – or even with your agile competitors. You need to adopt a new paradigm for competition: clock speed.

**Exhibit 2: Competing at Clock Speed**

**Self-assessment**

<table>
<thead>
<tr>
<th>Normal</th>
<th>Fast</th>
<th>Clock Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lean, Agile Organization</td>
<td>• Hierarchical and matrixed</td>
<td>• Focus on short impact cycles</td>
</tr>
<tr>
<td></td>
<td>• Weeks to decide</td>
<td>• Decisions quick and clear</td>
</tr>
<tr>
<td></td>
<td>• Accountability unclear</td>
<td>• Clear and concentrated accountability</td>
</tr>
<tr>
<td>Two-Speed Systems</td>
<td>• Systems often a barrier</td>
<td>• Systems sometimes set the pace</td>
</tr>
<tr>
<td></td>
<td>• Complex monolithic core systems and architecture</td>
<td>• Mid tier and APIs emerging</td>
</tr>
<tr>
<td></td>
<td>• Expensive to maintain</td>
<td>• Agile and legacy separated, infused with digital talent</td>
</tr>
<tr>
<td>Culture of Experimentation</td>
<td>• Failure not discussed</td>
<td>• Failure tolerated at margin</td>
</tr>
<tr>
<td></td>
<td>• Act only with certainty</td>
<td>• Pockets of risk taking</td>
</tr>
<tr>
<td></td>
<td>• Perfect or not at all</td>
<td>• Some test and learn</td>
</tr>
<tr>
<td>Let the Customer Do the Work</td>
<td>• Verification focused</td>
<td>• Process excellence</td>
</tr>
<tr>
<td></td>
<td>• Highly manual</td>
<td>• Automated</td>
</tr>
<tr>
<td></td>
<td>• Work is revenue</td>
<td>• Verification streamlined</td>
</tr>
<tr>
<td>Focus on Core Assets</td>
<td>• Core assets unclear</td>
<td>• Core asset clarity</td>
</tr>
<tr>
<td></td>
<td>• Bias towards in house</td>
<td>• Significant outsourcing in process and technology</td>
</tr>
<tr>
<td></td>
<td>• Partners at arms length</td>
<td>• Performance-based vendor contracts</td>
</tr>
<tr>
<td>Leadership to Compete</td>
<td>• Diverse value and behavior expectations</td>
<td>• Shared value and behavior norms</td>
</tr>
<tr>
<td></td>
<td>• Top down governance, wait for slowest approval</td>
<td>• Two-speed workforce</td>
</tr>
<tr>
<td></td>
<td>• Advancement based on process and input</td>
<td>• Advancement based on outcome not input</td>
</tr>
</tbody>
</table>

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