the culture of high performance organizations

@jehumble
#cultivate 2015, portland
“If work is simply a transaction of time and money we can’t ask for people’s hearts and minds”

shareholder value
Shareholder value is the dumbest idea in the world ... [it is] a result, not a strategy ... Your main constituencies are your employees, your customers and your products.

Jack Welch | http://www.ft.com/cms/s/0/294ff1f2-0f27-11de-ba10-0000779fd2ac.html

what is culture?

“A pattern of shared tacit assumptions that was learned by a group or organization in its history and that distinguishes one group or organization from others.” - Peter Drucker
what is culture?

“A pattern of shared tacit assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.”

— Edgar Schein, The Corporate Culture Survival Guide

what is culture?

“Our true culture is made primarily of the things no one will say... Culture is about power dynamics, unspoken priorities, written or unwritten, visible or hidden, conflicts, and power plays.”
“Our true culture is made primarily of the things no one will say... Culture is about power dynamics, unspoken priorities and beliefs, mythologies, conflicts, enforcement of social norms, creation of in/out groups and distribution of wealth and control inside companies.”

— Shanley Kane I @shanley I Your Startup Is Broken: Inside the Toxic Heart of Tech Culture

IT as a competitive advantage

“Firms with high-performing IT organizations were twice as likely to exceed their profitability, market share,...
“Firms with high-performing IT organizations were *twice as likely* to exceed their *profitability, market share* and *productivity* goals.”


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**top predictors of organizational performance**

“I would recommend this organization as a good place to work.”

“I am satisfied with my job.”

“My job makes good use of my skills and abilities.”
“I would recommend this organization as a good place to work.”

“I am satisfied with my job.”

“My job makes good use of my skills and abilities.”

“I have the tools and resources to do my job well.”

“We use data from app perf & infra monitoring tools to make business decisions daily.”

**high trust culture**

how organizations process information

<table>
<thead>
<tr>
<th>Pathological (power oriented)</th>
<th>Bureaucratic (rule oriented)</th>
<th>Generative (performance oriented)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low cooperation</td>
<td>Modest cooperation</td>
<td>High cooperation</td>
</tr>
<tr>
<td>Messengers shot</td>
<td>Messengers neglected</td>
<td>Messengers trained</td>
</tr>
<tr>
<td>Responsibilities shirked</td>
<td>Narrow responsibilities</td>
<td>Risks are shared</td>
</tr>
<tr>
<td>Bridging discouraged</td>
<td>Bridging tolerated</td>
<td>Bridging encouraged</td>
</tr>
</tbody>
</table>
### Measuring Culture

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree or disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>On my team, information is actively sought.</td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
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<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
</tr>
<tr>
<td>On my team, failures are learning opportunities, and messengers of them are not punished.</td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
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<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
</tr>
<tr>
<td>On my team, responsibilities are shared.</td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
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<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
</tr>
<tr>
<td>On my team, cross-functional collaboration is encouraged and valued.</td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
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<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
<td><img src="#" alt="Status" /></td>
</tr>
</tbody>
</table>

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Westrum, “A Typology of Organizational Cultures” [http://bmj.co/1BGRh5q](http://bmj.co/1BGRh5q)
<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>On my team, information is actively sought.</td>
<td></td>
<td></td>
</tr>
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<td>On my team, failures are learning opportunities, and messengers of them are not punished.</td>
<td></td>
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</tr>
<tr>
<td>On my team, responsibilities are shared.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On my team, cross-functional collaboration is encouraged and rewarded.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On my team, failure causes enquiry.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On my team, new ideas are welcomed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**changing culture**

http://www.thisamericanlife.org/radio-archives/episode/403/nummi

http://sloanreview.mit.edu/article/how-to-change-a-culture-lessons-from-nummi/

Schein, *The Corporate Culture Survival Guide*
http://www.thisamericanlife.org/radio-archives/episode/403/nummi
http://sloanreview.mit.edu/article/how-to-change-a-culture-lessons-from-nummi/

Schein, *The Corporate Culture Survival Guide*

the production line
TOYODA AUTOMATIC LOOM TYPE G

“Since the loom stopped when a problem arose, no defective products were produced. This meant that a single operator could be put in charge of numerous looms, resulting in a tremendous improvement in productivity.”
A single operator could be put in charge of numerous looms, resulting in a tremendous improvement in productivity.

http://www.toyota-global.com/company/vision_philosophy/toyota_production_system/jidoka.html

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**hp laserjet firmware division**

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### 2008

<table>
<thead>
<tr>
<th>Costs</th>
<th>Cycle times</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% - code integration</td>
<td>Commit to trunk: 1 week</td>
</tr>
<tr>
<td>20% - detailed planning</td>
<td>Builds / day: 1-2</td>
</tr>
<tr>
<td>25% - porting code</td>
<td>Full manual regression: 6 wks</td>
</tr>
<tr>
<td>25% - product support</td>
<td></td>
</tr>
<tr>
<td>15% - manual testing</td>
<td></td>
</tr>
<tr>
<td>~5% - innovation capacity</td>
<td></td>
</tr>
</tbody>
</table>
futuresmart rearchitecture

Reduce hardware variation

Create a single package

Implement continuous integration

Invest in a comprehensive test automation

Create a simulator
hp laserjet firmware division

2008
10% - code integration
20% - detailed planning
25% - porting code
25% - current product support
15% - manual testing
~5% - innovation

2011
2% - continuous integration
5% - agile planning
15% - one main branch
10% - current product support
5% - most testing automated
~40% - innovation

The remaining 23% on RHS is spent on managing automated tests.

deconomics
The remaining 23% on RHS is spent on managing automated tests.

The economics

2008 to 2011

- overall development costs reduced by ~40%
- programs under development increased by ~140%
- development costs per program down 78%
- resources now driving innovation increased by 8X

A Practical Approach to Large-Scale Agile Development
(Addison-Wesley) Gruver, Young, Fulghum

THE FOUR STEPS OF THE IMPROVEMENT KATA MODEL

A systematic, scientific pattern of working
THE FOUR STEPS OF THE IMPROVEMENT KATA MODEL

A systematic, scientific pattern of working

1. Understand the Direction or Challenge
2. Grasp the Current Condition
3. Establish the Next Target Condition
4. Iterate Toward the Target Condition

Planning
Executing

improvement kata

What is the target condition? (The challenge)
improvement kata

What is the target condition? *(The challenge)*

What is the actual condition now?

What obstacles are preventing you from reaching it? which one are you addressing now?

What is your next step? *(Start of PDCA cycle)*

When can we go and see what we learned from taking that step?

improvement kata

<table>
<thead>
<tr>
<th>Rank</th>
<th>Theme</th>
<th>Exit Criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Quality threshold</td>
<td>Objective Met/Objective not met</td>
</tr>
<tr>
<td>1</td>
<td>Quarterly bit release</td>
<td>AI Final P1 change requests fixed</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>L2 test failure 24-hour response</td>
</tr>
</tbody>
</table>
### Table 5.1. Sample Mini-Milestone Objectives (MM30 Objectives)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Theme</th>
<th>Exit Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Quality threshold</td>
<td>P1 issues open &lt; 1 week</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L2 test failure 24-hour response</td>
</tr>
<tr>
<td>1</td>
<td>Quarterly bit release</td>
<td>A) Final P1 change requests fixed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B) Reliability error rate at release criteria</td>
</tr>
<tr>
<td>2</td>
<td>New platform stability and test coverage</td>
<td>A) Customer Acceptance Test 100% passing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B) All L2 test pillars 98% passing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C) L4 test pillars in place</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D) L4 test coverage for all Product Turn On requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E) 100% execution of L4 tests on new products</td>
</tr>
<tr>
<td>3</td>
<td>Product Turn On dependencies and key features</td>
<td>A) Print for an hour at speed to finisher with stapling</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B) Copy for an hour at speed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C) Enable powersave mode</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D) Manufacturing nightly test suite execution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E) Common Test Library support for four-line control panel display</td>
</tr>
<tr>
<td>4</td>
<td>Build for next-gen products</td>
<td>A) End-to-end system build on new processor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B) High-level performance analysis on new processor</td>
</tr>
<tr>
<td>5</td>
<td>Fleet integration plan</td>
<td>Align on content and schedule for “slivers” of end-to-end agile test with system test lab</td>
</tr>
</tbody>
</table>

### impact mapping

**German settlement team**

- Process important exceptions faster
- Improve exception reports
- Prioritise exceptions
- Process fewer transactions manually
- Improve straight-through processing
- Cause fewer exceptions
- Inform about potential exceptions early
Impact mapping

Gojko Adzic, Impact Mapping

Hypothesis-driven delivery

We believe that

[building this feature]
[for these people]
We believe that
[building this feature]
[for these people]
will achieve [this outcome].

We will know we are successful when we see
[this signal from the market].

Jeff Gothelf “Better product definition with Lean UX and Design” http://bit.ly/TyIT6A

experiments
Different types of user research, courtesy of Janice Fraser

do less

“Evaluating well-designed and executed experiments that were designed to improve a key metric, only about 1/3 were successful at improving the key metric!”
“Evaluating well-designed and executed experiments that were designed to improve a key metric, only about 1/3 were successful at improving the key metric!”

“Online Experimentation at Microsoft”, Kohavi et al http://stanford.io/130uW6X

Amazon May Deployment Stats
(production hosts & environments only)

11.6 seconds
Mean time between deployments (weekday)

1,079
Max # of deployments in a single hour

10,000
Mean # of hosts simultaneously receiving a deployment
Mean time between deployments (weekday)

1,079

Max # of deployments in a single hour

10,000

Mean # of hosts simultaneously receiving a deployment

30,000

Max # of hosts simultaneously receiving a deployment


innovation culture

“I think building this culture is the key to innovation. Creativity must flow from everywhere. Whether you are a summer intern or the CTO, any good idea must be able to seek an objective test, preferably a test that exposes the idea to real customers. Everyone must be able to experiment, learn, and iterate.”
flow from everywhere. Whether you are a summer intern or the CTO, any good idea must be able to seek an objective test, preferably a test that exposes the idea to real customers. Everyone must be able to experiment, learn, and iterate.


thank you!

@jezhumble | jez@chef.io
http://chef.io/
http://continuousdelivery.com/