Rowing in the same direction

A devops approach to leading people

Lindsay Holmwood

@auxesis
“A bad system beats a good person, every time.”

– Edward Deming
What makes high performing teams endure?
How do you create a resilient culture?
What is culture?
Schein's three levels of culture
Artifacts

Values

Assumptions
National
Organisational
Team
Occupational
Artifacts
physical manifestations of culture
ceremonies
ORGANIZATION CHART of THE TABULATING MACHINE CO.

COMPUTING-TABULATING-RECORDING CO.
Offices - 50 Broad St - New York City

THE TABULATING MACHINE CO.
General Offices - 50 Broad St.
New York City

FACTORIES:
- WASHINGTON, D.C.
- ENDICOTT, N.Y.
- DAYTON, O.

THOMAS J. WATSON President
R. L. Houston General Manager

OFFICERS:
- Thomas J. Watson - President
- Gershom Smith - Vice-President
- R. L. Houston - Treasurer
- W. D. Jones - Asst. Treasurer
- James S. Ogsbury - Secretary
- O. E. Brautmann - Asst. Secretary

DIRECTIONS:
- George M. Bond
- James S. Ogsbury
- George W. Fairchild
- Gershom Smith
- Thomas J. Watson

SYSTEMS:
- Gershom Smith
- Pierre Bonteau

SALES:
- G. W. Spahn

ORDERS:
- Billing
- Cost
- Acts
- Collections
- Accounts Payable
- Cashier
- General Books
- Financial Reports
- Examination of Specifications
- Filling of Contracts
- Producing Machines
- Maintaining Machines
- Producing cards
- Selling cards

SALES RECORDS:
- Statements
- Companions
- Mailing
- Filing
- Inquiries
- Messengers
- Advertising Lists
- Users Lists

MAILING & FILING:
- W. D. Jones
- Wm Maclardy

ACCOUNTING:
- General Publicity
- House Organs
- Booklets
- Pamphlets
- Circulars
- Catalogs
- Layouts
- Copy
- Cuts
- Illustrations

AUDITING MACHINE CO.
Thos. J. Watson - President

DIRECTORS:
- Geo. W. Fairchild
- Geo. O. Leavitt
- Herman Hollenth
- Jas. S. Ogsbury
- Thos. J. Watson

OFFICERS:
- Thos. J. Watson - President
- Gershom Smith - Vice-President
- O. E. Brautmann - Treasurer
- James S. Ogsbury - Secretary

ORG CHARTS
desk layout
documentation
static int __init procfs_init(void)
{
    //new entry in proc root with 
    proc_rtkit = create_proc_entry(
        if (proc_rtkit == NULL) return 0,
        proc_root = proc_rtkit->parent;
        if (proc_root == NULL /* strcmp(proc
        return 0;
    }
    proc_rtkit->read_proc = rtkit_read;
    proc_rtkit->write_proc = rtkit_write;

MODULE INIT/EXIT
static int __init rootkit_init(void)
if (!procfs_init) {
    !fs_init() { 
        fs_clean();
    }
}
most visible parts of an org’s culture
easiest part of a culture to adopt
Values
conscious goals, strategies, and philosophies
rules that guide how we interact with people
rules that guide how we do our work
“we will dominate the market”
“management is available, and listen to our concerns”
“we value quality over delivery speed”
“nobody will be fired for making an honest mistake”
values:

lived

vs

aspirational
Communication

We have an obligation to communicate.
Respect

We treat others as we would like to be treated.
Integrity
We work with customers and prospects openly, honestly, and sincerely.
Excellence
We are satisfied with nothing less than the very best in everything we do.
We conduct business affairs in accordance with all applicable laws and in a moral and honest manner.
Work as imagined vs Work as done
Be clear about what values are what
Assumptions
beliefs, perceptions, thoughts, feelings
exist at an unconscious level
hard to discern
“anyone can take on leadership responsibility”
“bad outcomes come from bad people”
“it’s OK to withhold information”
“individual performance is valued over team performance”
“we can trust that team”
Culture is determined by our people
If we can change our people, we can influence our culture.
“Better people make better All Blacks”

– Graham Henry
What makes a good team member?
Trust
Vulnerability
Assume the best of others
Aware of their cognitive biases
Aware of the Fundamental Attribution Error
We judge others by their actions.

We judge ourselves by our intentions.
Aware of Hindsight Bias
“knew it all along” effect or “creeping determinism”
Memory distortion
new information
received after the fact
influences how we remember the event 😐
Distortion favours the actor
Distortion used to form a judgement
“you were responsible for this failure”
neglectful, inattentive, derelict of duty
Attribute failure
to a person
not a system
The more negative an outcome, the stronger the bias.
MH17 tragedy reveals need for flight path overhaul

Flight MH17 took abandoned flight path

MH17 flightpath questioned as Malaysia mourns second airline tragedy

Flight MH17 ‘could have avoided Ukrainian airspace for $66 per passenger’

Why was MH17’s flight path over a conflict zone?
Hindsight bias is your culture killer
taints all interactions.
trust

hard to build, easy to lose
5:1 ratio
regular 1:1s
create a space for people to vent
create a space for people to complain
regular, minimum half hour
take a genuine interest
eliminate performance reviews
Thrive in conflict
Ideas vs Personality
Can discern between the two
Strong opinions, loosely held
Commit and act
You don’t need consensus
But you need commitment
People must be willing to put personal opinions aside.
Don’t have to actively sabotage
Disagreement is OK
“I don’t agree with the decision, but I’m going to do everything I can to see it succeed”
Understands relationship to work
Are you an integrator or a segmenter?
Segmenters
Create partitions between work and home
Segmenters

Use rituals to reinforce boundaries
Establish rituals.

Wear shoes while working.
Establish rituals
Different devices
Establish rituals
Walk around the block
Establish rituals
Standing desks
Integrators
Blend home and work life
Integrators

Strong desire to blur the domains
Integrators
Easily transition between domains
Integrators are more accepting of segmenters than vice-versa.
Integrators need boundaries too, and strategies for disconnecting.
Segmenters report higher levels of job satisfaction compared to integrators.
Why is this important?
Integration is a slippery slope to burnout
6 contributing factors

1. Workload
2. Control
3. Reward
4. Community
5. Fairness
6. Values
6 contributing factors

1. Workload:

Too much
Too complex
Too urgent
Too awful
6 contributing factors

1. Workload:

- The amount of work to complete in a day
- The complexity of my work
- The intensity of demands from customers
- The firmness of deadlines
- The frequency of surprising, unexpected events
- The opportunity to settle into a comfortable groove
- The frequency of interruptions in my workday
- The proportion of my work time spent with customers
- The amount of time I work alone
- The amount of time I work with other employees
Understand your relationships with work
Promote a culture of segmentation
What makes a good team?
“Better people make better All Blacks”

– Graham Henry
Race
Gender
 Sexual orientation
Age
Socio-economic status
You hire for diversity by seeking out diverse candidates
Diversity is for naught if you don’t include, adapt, and embrace differences as part of your culture.
That means:

Changing things that are “the way we do things here”
That means:

Listening to new, dissenting voices
That means:
There will be uncomfortable conversations
That means:

Creating safe mechanisms for people to raise criticism
Safe:
Voluntary
Non-punitive
That means:

Acting on that criticism
Leadership in the absence of leadership
Having a title isn’t a requirement for leadership
If the lead steps away, the team functions effectively for an extended period of time.
surprises are indicators of team misalignment
PEOPLE CAN LOOK OUT FOR THEMSELVES

I AM THE TEAM'S SHIT UMBRELLA

EVERYONE HAS THEIR OWN SHIT UMBRELLA
The team fosters conflict around ideas themselves.
the team has the authority and autonomy to remove blockers themselves
team leaders can now:
observe & influence trends & behaviour across the org
team leaders can now:
provide better context to the team
team leaders can now:
focus on building
better relationships
with non-technical contributors
team leaders can now:
focus on integrating non-technical contributors into ways of working
Non-technical contributions are on equal footing.
"Organizations which design systems are constrained to produce designs which are copies of the communication structures of these organizations."

– Melvin Conway
Mirroring
The mirroring hypothesis: theory, evidence, and exceptions

Lyra J. Colfer and Carliss Y. Baldwin*

“In a complex system, the technical architecture and the division of labor will “mirror” one another in the sense that the network structure of one will correspond to the structure of the other.”

JEL classification: D23, D85, L22, O32
Two separate research traditions studying mirroring
1. Computer science
Conway’s law
2. Management
Org + product design & orgs + products as complex systems
What is mirroring?
Two networks
Organisational
Technical
Organisational Mirroring Technical
We do this to solve problems.
We do this to take people to where the problems are.
Who owns this system?
We do this because it’s economical
Organization design: an information processing view

Galbraith, 1974
As uncertainty increases, the amount of information that must be processed by decision makers increases.
The org can respond by reducing the need to process information.
The org can respond by increasing the capacity to process information.
4. Creation of Slack Resources
5. Creation of Self-Contained Tasks

Reduce the Need for Information Processing

Figure 1. Organization Design Strategies
Creation of lateral relations:

- Direct contact
- Liaison roles
- Task forces
- Teams
- Integrating roles
- Managerial linking roles
- Matrix organisation
Creation of lateral relations:
Matrix organisation
Teams
Creation of lateral relations: Matrix organisation

Teams

- General Manager
- Product Management
  - Product Line #1
  - Product Line #2
- Dev
  - Frontend
  - Backend
- Ops
  - App eng
  - Infra
- Design
  - UX/UI
  - Research

---

= Technical authority over the product
= Formal authority over the product (in product organization, these relationships may be reversed)
Why do we stop at dev and ops?
We can also include:

- support
- marketing
- design
- analytics
- legal
- finance
What happens if we don’t?
This paper demonstrates that the traditional categorization of innovation as either incremental or radical is incomplete and potentially misleading and does not capture the full range of possibilities of innovation. Instead, we propose a new concept of architectural innovation, which involves the reconfiguration of existing product technologies and the failure of established firms.

Architectural innovation is a form of innovation that involves the reconfiguration of existing product technologies and the failure of established firms. This concept is important because it allows us to better understand the dynamics of innovation and the competitive implications of new technologies.

We illustrate the concept's explanatory force through an empirical study of the semiconductor photolithographic alignment equipment industry, which has experienced a number of architectural innovations.

Henderson & Clark, 1990
3 year study of semiconductor photolithographic alignment equipment industry
field based study, high rate-of-change industry

The core of the data is a panel data set consisting of research and development costs and sales revenue by product for every product development project conducted between 1962, when work on the first commercial product began, and 1986. This data is supplemented by a detailed managerial and technical history of each project. The data were collected through research in both primary and secondary sources. The secondary sources, including trade journals, scientific journals, and consulting reports, were used to identify the companies that had been active in the industry and the products that they had introduced and to build up a preliminary picture of the industry’s technical history.
# 4 waves of innovation between 1962-1986

<table>
<thead>
<tr>
<th>Equipment</th>
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<th>Critical relationships between components</th>
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4 waves of innovation
new leader after each:
Kulicke ↔ Kasper ↔ Perkin-Elmer ↔ GCA ↔ Nikon

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Source: Field interviews, internal firm records (Henderson, 1988).
4 waves of innovation
each incumbent
could not course correct

A Summary of Architectural Innovation in Photolithographic Alignment Technology

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4 waves of innovation

each incumbent invested heavily in new technology

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4 waves of innovation

each incumbent
structured organisation
and communication
based on product architecture
## 4 waves of innovation

What about this makes sense?

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Henderson & Clark’s framework for defining innovation

Based on Schumpeter, 1942

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Linkages between Core Concepts and Components:

- Unchanged
- Changed
Strongly mirrored
Broken mirror

Core Concepts

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Linkages between Core Concepts and Components

Unchanged

Don’t mirror

Mirror
How do we, as leaders, build resilient organisations?
Artifacts

Values

Assumptions
Our systems are artifacts
Our processes are artifacts
Tools are a snapshot of our org’s culture
Tools are a snapshot of our org’s values and assumptions
Artifacts influence behaviour
Encode the org behaviour you want to see into your artifacts
Change your org’s values by changing your artifacts
Artifact:

All changes go through a CD pipeline.
Value:

We create fast feedback loops to learn from changes in production.
Artifact:
Developers and managers do on-call
Value:

Performance, availability and sustainability are everyone’s responsibility
Artifact:

Our ceremonies include and engage non-technical disciplines
Value:

Nobody has all the answers. We succeed by working together.
But the tools are only a means to an end.
The goal is transforming our ways of working
We can **must** include:

- support
- marketing
- design
- analytics
- legal
- finance
“If you could get all the people in the organisation rowing in the same direction, **you could dominate any industry, in any market, against any competition, at any time.**”

– Patrick Lencioni
I'm Lindsay
Thank you!

❤ the talk? Let @auxesis know.
DEVOPS DAYS
NEWCASTLE

October 24th and 25th, Newcastle NSW

devopsdaysnewy.org
Edgar Schein  
→ Organisational Culture & Leadership

L. David Marquet  
→ Turn The Ship Around

Patrick Lencioni  
→ Silos, Politics, and Turf Wars  
→ 5 Dysfunctions of a Team

Adam Grant  
→ WorkLife podcast

Christina Maslach  
→ Banishing Burnout

❤ the talk?  
Let @auxesis know.