

ATOMIC OBJECT

# Companies for Craftsmen<sup>people</sup>

Carl Erickson

@carl\_erickson

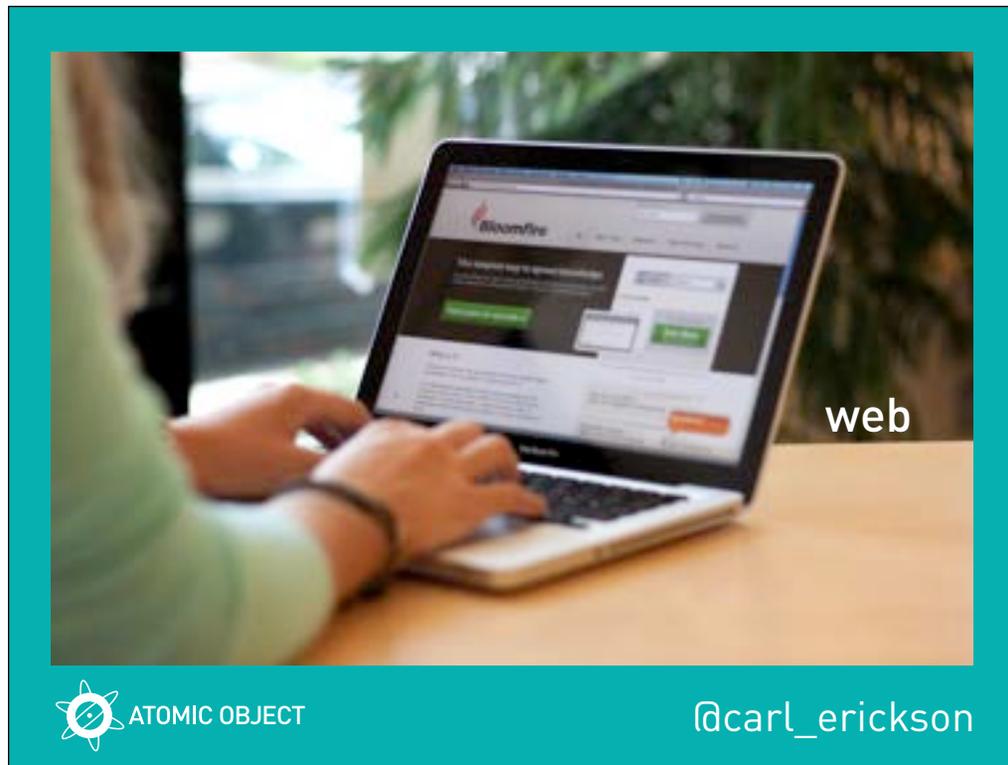
Path to Craftsmanship, 2013

I'm Carl Erickson, co-founder and president of Atomic.

A quick word about the title of my talk. I'm personally concerned that our industry is lopsided with respect to employing women.

I think gender neutral language actually does matter, and I've been speaking and writing accordingly for years. For some reason this word craftsman was a holdout, but I've recently decided that's silly, and craftsperson is in fact a fine word.

Since what I'm going to talk about today represents things I've learned from building and growing Atomic, I thought it might be nice to give you some context about what we do...



About 50% of our revenue is from web apps

This is Bloomfire, a startup that came out of Michigan. They are in the social learning space.

Bloomfire lets you create private libraries by easily capturing employees knowledge through videos, screen captures and slide decks.

Bloomfire was acquired a year or so ago. We took them from a very ambitious but vague idea through their launch at SXSW.

We also do a lot of work in mobile...

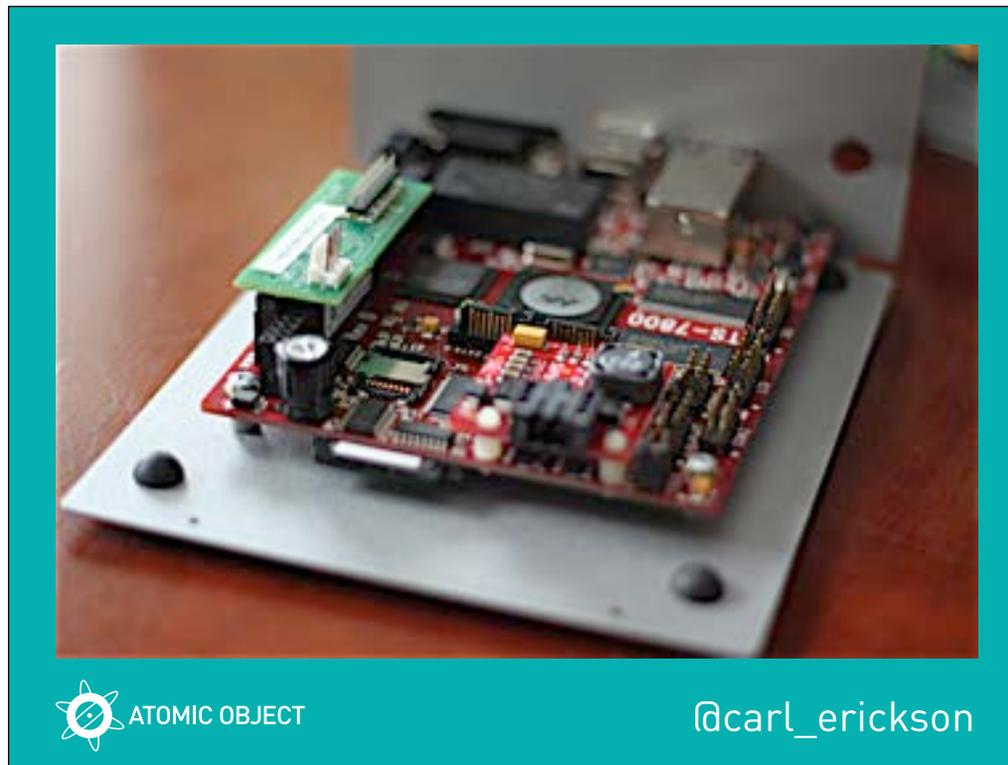


We build iOS, Android and BlackBerry native apps and web mobile apps.

This is a showroom experience and education app for Herman Miller.

About a quarter of our revenue is mobile.

Unusually, we also have a thriving agile embedded practice...



We got into embedded development 7 years ago when a firmware engineer at one of our customers told us “you can’t test my stuff”.

Telling someone at Atomic that you can’t test something is like waving a red flag in front of a bull.

As a result of that challenge, we pioneered agile development practices in the embedded space.

You might notice I didn’t mention desktop.

A Java app for automotive factories was actually our very first project. We still do that work, but it’s been significantly displaced by web over the years.

A quick bit about me...



@carl\_erickson

I started Atomic in 2001 after teaching computer science for 10 years at Grand Valley State University in Michigan

A couple of years ago I decided that I wanted to do some informal teaching again by writing about what I'd learned about building and running a software design and development company

The title of my blog, Great Not Big, refers to where I believe your focus should be to create a really great company or team

So what, you might reasonably ask? You're this guy, you have this company that builds software, you have a blog you've shamelessly plugged.

It seems reasonable to ask why anyone should listen to me talk about companies that are good for software craftspeople.

One of our values at Atomic is transparency. I'm going to take advantage of that and share some more details that I hope helps answer that question, and at the very least gives you more context for where I'm coming from...



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We have two offices

- headquarters in Grand Rapids, on the top
- an office we opened in downtown Detroit last year

We're 12 years old this summer.

We employ 43 people, not counting summer interns

We'll do right around \$6.4M in revenue this year

Believe it or not, that puts us in the 90th percentile by revenue of companies like ours

We've only had one unprofitable quarter since our founding

Our profit margin is substantially higher than some industry benchmarks

We've never laid anyone off, and all of the people who work for us are employees – we hardly ever use contractors

Maybe most importantly, we've thrived through several tricky transitions:

- My co-founder left the company in 2009

- We launched a new office

- We grew new leadership internally from our developer ranks

- We've grown from staff augmentation, through project responsibility, and into product development

- We've implemented our own employee ownership plan – 22 employees besides me own 47% of our company

Building something worthy gets you thinking...



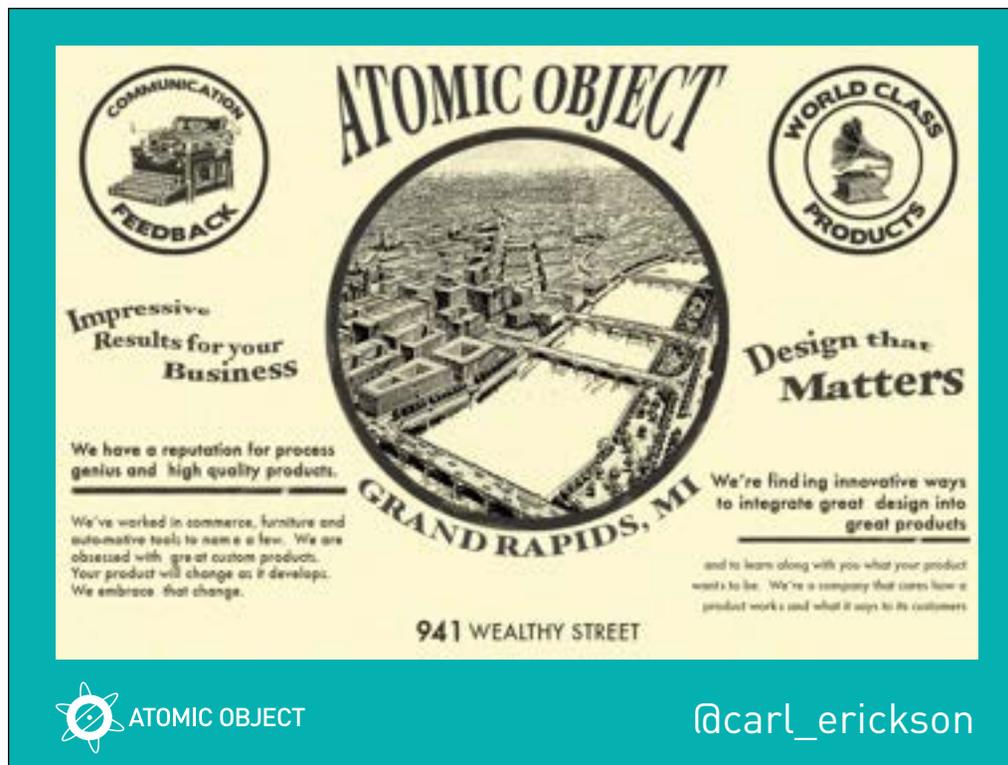
A few years ago I set myself a goal: the company should outlast my daily involvement...

I upped that goal last year to Atomic being the first 100 year old software design and development consultancy

(if the singularity occurs before then, I'm letting myself off the hook)

Thinking about 2101 is really hard. I don't know what it looks like. I don't know what Atomic will be doing. I don't know what cool image to use.

I found it easier to flip this, and ask myself the question, if Atomic were celebrating its 100 year anniversary this year, and I were just the most recent person to have run it, what attributes looking back over the years seemed to explain why we were made the milestone?...



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I dug back into the company archives and found this old advertisement from 1901.

Why have we survived for 100 years when other firms have vanished?

It can't be the technology we used back then: steel, wood, "electricity"

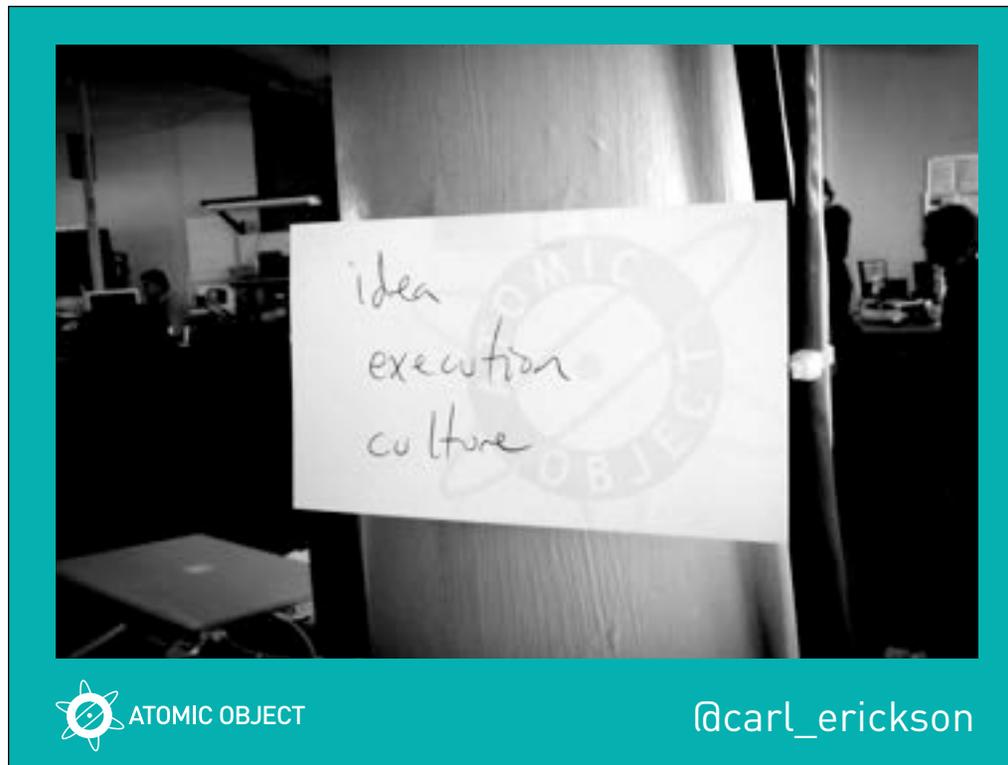
It can't be that we were a family business – luckily, his kids

It certainly wasn't the founder – he's long gone

I came up with these attributes:

- financially conservative
- self-renewing, internal ownership
- governance and leadership succession
- an ability to adapt
- a good place for craftspeople to work

It's the last one I'm talking about today...



There are three things I think you need to get right to have a sustainable company.

First, you need to have a reasonably good idea. And you must be able to execute well.

But idea and execution aren't enough. You also you need to create and nurture a powerful culture.

Being a good computer scientist, I like to form abstractions. What would you call a service company that helps other companies create innovation?...

# Innovation Services



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Innovation services firms sell their expertise in innovation as a service.

I've found examples of innovation services firms in software, product design, mechanical design, entertainment, special effects, and environment design.

It's all too common in the technical world for people to conflate their passions with their preferences. That's where the endless flame wars of Ruby vs Clojure or PHP vs Rails come from.

I suspect a common element of innovation services firms is that they show a **passion** for higher-level concerns -- things like quality, fit, predictability, maintainability, productivity -- and a **preference** for lower-level concerns like languages, platforms, and tools.

Innovation services firm have some common characteristics...

# Innovation Services + The Craft of Software



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Because they sell their services, these business have no leverage.

- It's an hour out, a dollar in.

And they don't typically have an exit the way a product company might.

Innovation services firms usually have two types of clients:

- well-funded startups (who don't know how to build a good team)
- large companies (who have budgets, but other priorities)

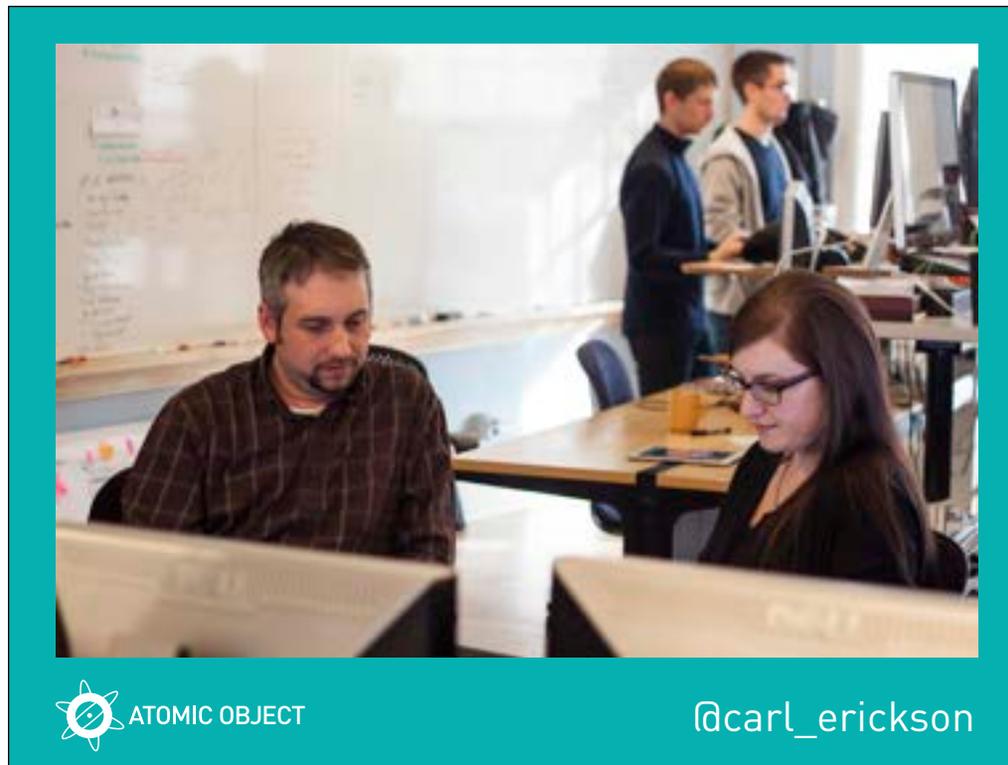
One of the things that make an innovation services firm a challenging place to work is their competition:

- they need to be significantly better than an internal team, and their external competition
- as a consultant, they are only as good as their last project

On the other hand, following the path of software craft is not taking the easy route either.

- many more ways of building software wrong than right
- software systems are naturally unconstrained, unlike other other engineering disciplines
- our craft requires life-long learning, lots of which is done on your own time

Since people generally do their best work when they're motivated and happy, we should be interested in figuring out how to organize our companies for this...



Happy and motivated makers and teams.

(Turns out it's hard to get real pictures of people working who look happy, since they're usually concentrating or discussing)

Then how do we get it?

Do toys make you happy? nerf battles in the office, anyone?

Is it your title that makes you happy?

How about pizza parties?

Fancy ergonomic chairs?

Can we buy happiness?...



How many of you would be happier on Monday morning if your boss gave you a \$10,000 raise?...

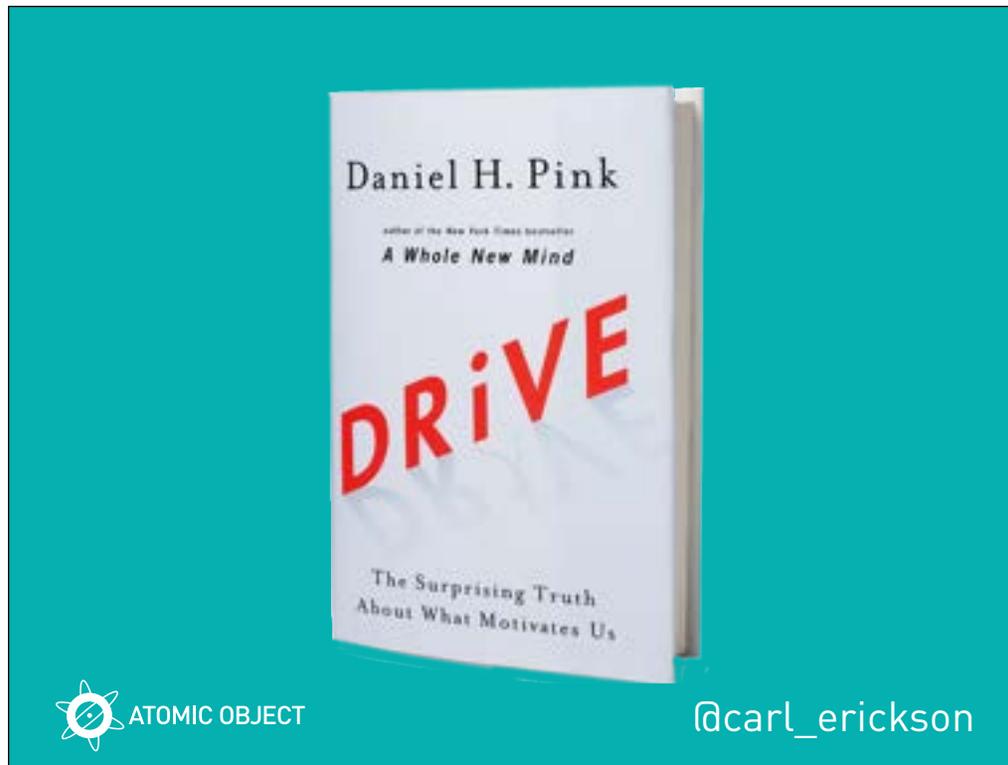
The results of a very large study came out in the last year or so. It showed that your day-to-day contentment and mood can indeed be improved, but only up to the point where you're making \$75k a year.

After that, more money doesn't equate to more daily happiness.

Studies have also shown that we all adjust quickly to changes in compensation. We're happy at first, but it quickly wears off.

So while money can be a powerful de-motivator (fairness issue), it's not a very effective lever for creating happy makers.

I find Daniel Pink's framework in his book Drive to be quite useful...



Pink differentiated between extrinsic motivations such as money, and intrinsic motivations. His claim is that intrinsic motivations are much more powerful.

Pink identified three intrinsic motivations...

Mastery – mastery is the opportunity to get better, to master your craft...

Autonomy – people want control over the work they do and how they do it...

Purpose – belief in the work you do, or alignment with the mission of the company

These things are common to all humans, not just makers. I find them very useful touch points when we're working on how Atomic does things.

But there are also two others that I'd add that I think are relevant to the goal of happy makers...

# Mastery Autonomy Purpose + Love of Craft Team Work



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Love of craft – interesting work, variety, ability to control quality, seeing people use what you build, building elegant programs

Team work –

I believe that accomplishing something with other people is a great way to live a satisfying life,  
team work is knowing you've got help when you need it,  
it's a sense of camaraderie that makes people connected and happy.

It also might be important if you want to see your work used, or if your purpose requires more than solo effort.

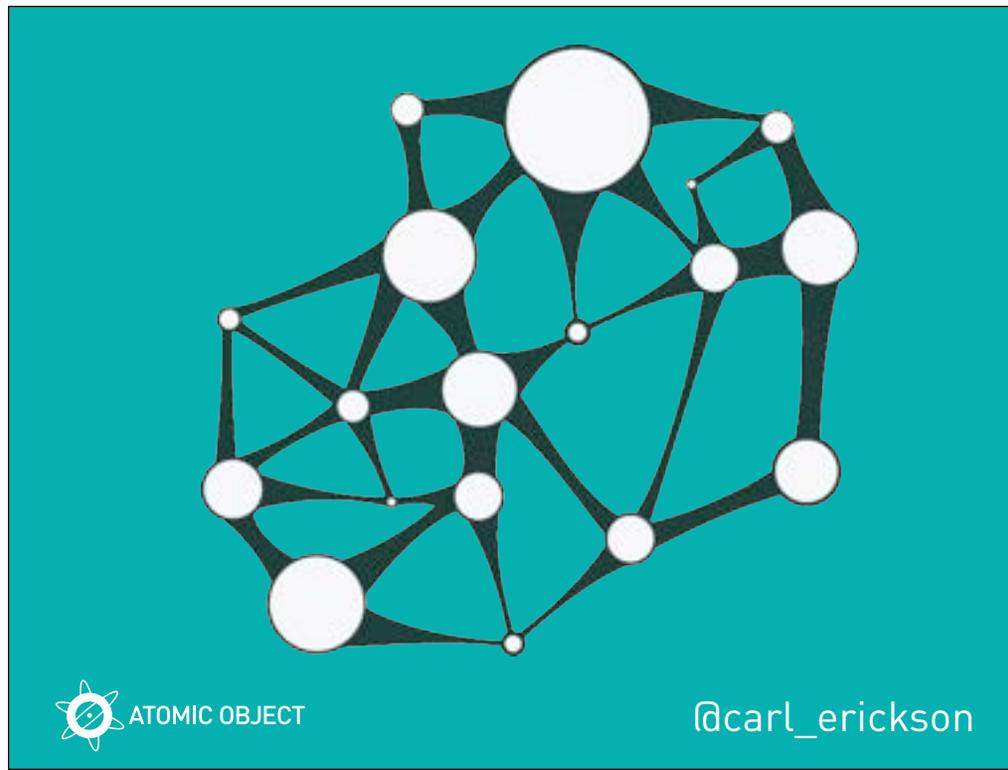
I think the team is the best unit of organization for a company of craftsmen.

- it's project- and hence client-centric
- it focuses on the makers
- it's an alternative to functional or hierarchical organizations

Pink's attributes of M, A, and P are very abstract. My adds are a little more concrete.

I want to share a little about our answer to the question of how you organize and run a company that might someday be 100 years old, because it is a good place to practice the craft of software design and development.

I think about this as the "model" of Atomic Object...



Our model is obviously not the only way to create a successful company

I do think I can say that it is one way, judging by the accomplishments I shared earlier

This graphic represents some aspects of how I think of this model  
organic, interconnected, large and small elements, complex

The value in the model is well beyond the sum of the individual components of the model.

It's easy to pick any given element, question its value, and come up with perfectly reasonable sounding alternatives.  
Example: hourly pay

It's hard to know how these elements interact and depend on each other.

It's also hard to predict what changing one of these elements might do to the whole

I've organized the 20 or so elements of our model into 3 groups...

People	Engagement	Friendship
Transparency	Governance	Learning
Architecture	Open Books	Biz Strategy
Offering	Clients	Culture
Compensation	Sales	Ownership
Leadership	Trust	Community
Focus	Quality	Data
Marketing		

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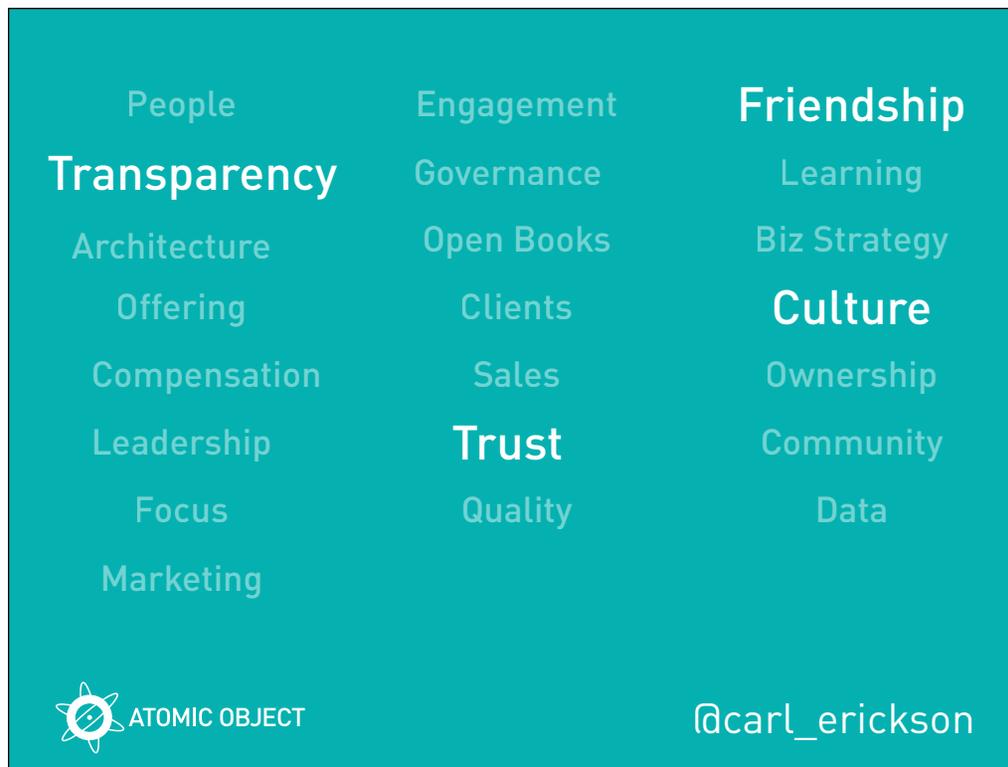
The groups are People, Generic Attributes, Specific Business Practices

This isn't a perfect taxonomy. There's overlap and redundancy and multiple membership.

In fact, it's probably better served with tags, as Neal was talking about this morning.

We could talk about any of these for a really long time.

I've selected four to focus on, then I'll open it up to questions...



Transparency, Friendship, Trust and Culture aren't businesses per se

I believe they are attributes of the company that make it a happy and fulfilling place for craftspeople to practice

Business practices can either support or undermine these attributes

Let's look at culture first...

culture



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Culture is something every company has, whether they talk about it or not.

If you know why you're in business, and you have shared, clearly articulated values, you'll find more alignment, easier recruiting, greater retention, and a common purpose

To describe your culture it helps to know why you exist.

Your 'why' might not be obvious...



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This is Simon Sinek's idea. Every organization has these elements:

what – you do (“we build software applications”)

how – you do it (“iteratively, test-driven, in pairs, with Rails, etc”)

and lastly,

why – why does your organization exist?

The why is closely related to Pink's 3rd element of motivation: purpose

I believe innovation services firms have a hard time articulating their why because of what they do.

How our teams operate on projects: adopted why

Atomic's “why” is

To build great software, and find better ways of doing it

That's why I added team work and love of craft to Pink's list

We use value mantras as shorthand for what we hold dear. It helps us talk explicitly about culture...

# Atomic Value Mantras

- Give a shit
- Share the pain
- Teach and learn
- Own it
- Act transparently

Our value mantras are like pattern names. They communicate a whole lot to people in the know.

We use them on a near-daily basis.

give a shit...  
share the pain...  
teach and learn...  
own it...  
act transparently...

We refer to these when we're deciding company guidelines, how to handle tricky situations, employee expectations, recruiting, assignments

A big part of our culture is how we organize work...

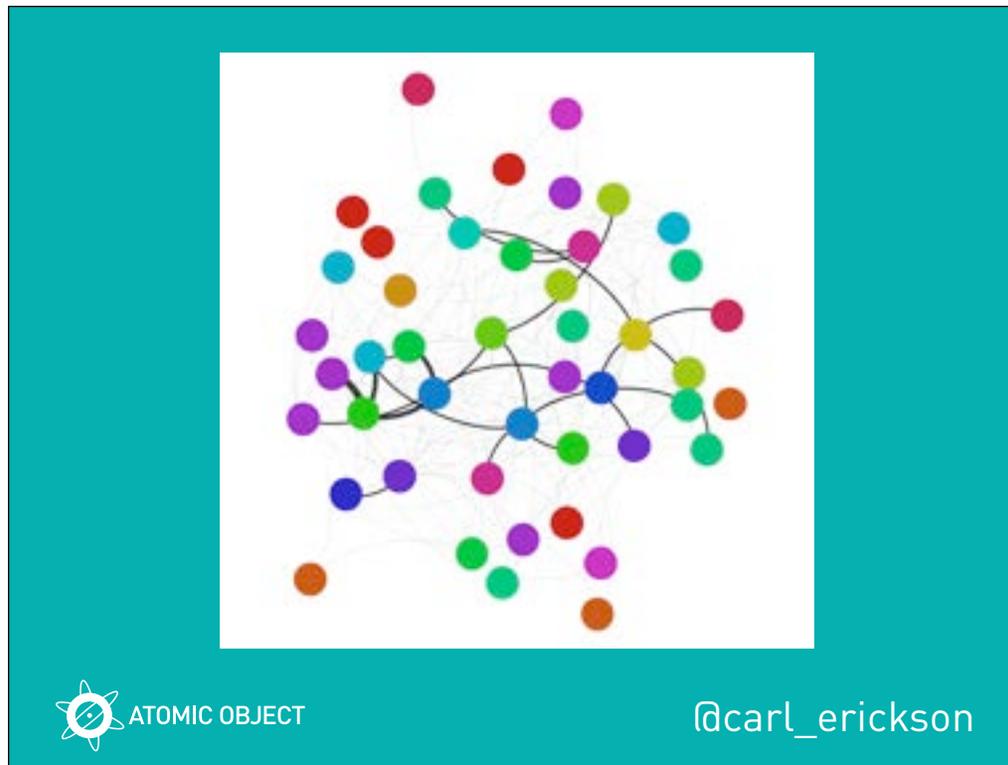


Our model is:  
co-located  
polyskilled  
self-managing  
teams of makers

The team is in fact the architecture of our company.

When we were small, changing project assignments kept us close

As we grew, that wasn't enough since it could take too long for everyone to work with everyone else...



We practice pair programming – what about a culture pair?

- Every new employee is assigned a culture pair
- Form a relationship
- Transmit AO culture
- Make it easy to ask questions
- Actively seek out opportunities to teach and learn

Mixed results: participation tends to drop off quickly.

Last year, we created pair lunches

The goal was to foster personal relationships

- Simple rules
- 2 people
- company pays
- one per pair per month

Graph shows our pair lunch data for the first year

- lots of people participated
- lots of random connections
- the bold lines are not the norm (good thing)

We did 228 pair lunches as a company in 2012. That's 450ish hours of bonding.

It's ironic that "act transparently" was added only recently. I think it's because it's so ingrained at Atomic, that it was kind of like fish not recognizing they swim in water...

transparency

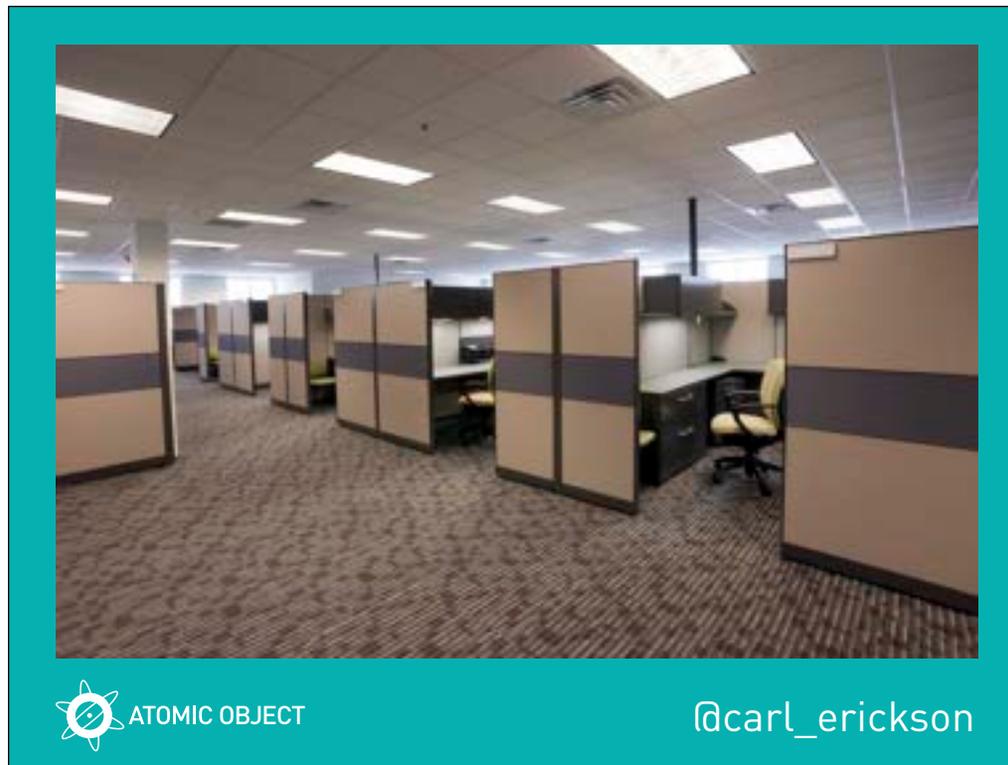


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Transparency has at least four important dimensions:  
facilities, business practices, clients, and projects

I believe it is really important to have alignment and consistency  
across those dimensions.

Facilities can be “open” while being very closed...

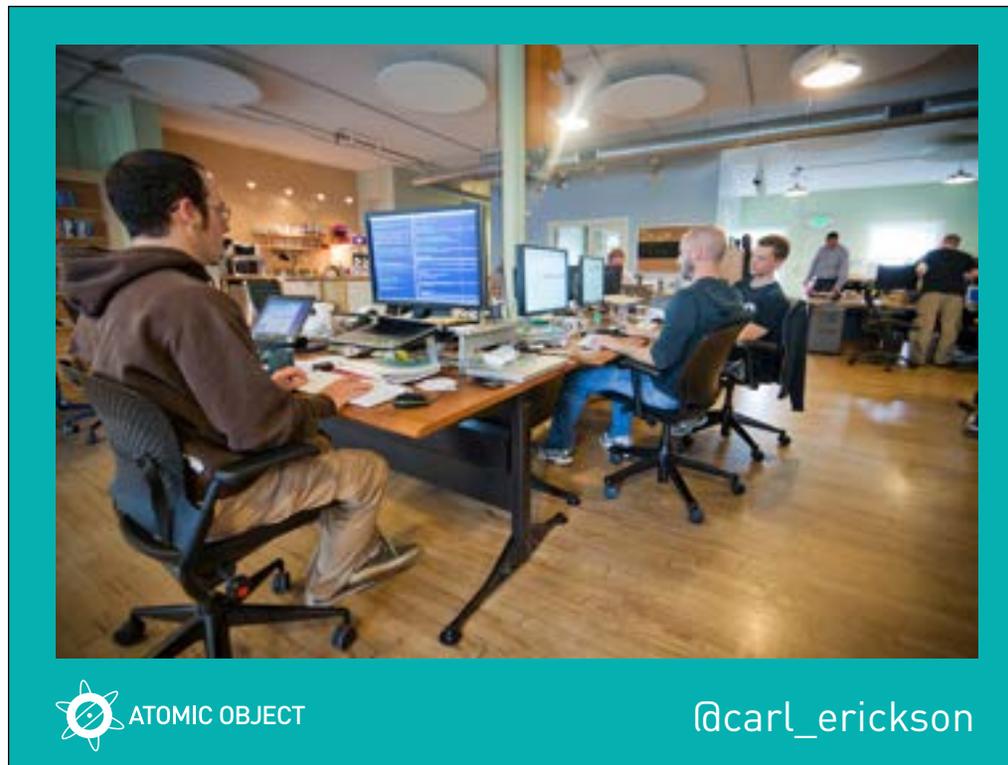


I happen to live in the region (West Michigan) where the “open office” was invented. Sorry about that.

As I’m sure any of you who have worked in these environments knows, cubicles combine the worst aspects of private offices and one big room.

They tend to be sterile, isolating, un-human, neat, clean, and orderly.

In contrast to this picture from our office which is...



messy, crowded, sometimes noisy, collaborative, informal, and human

contrast those pictures <- ->

This environment spreads knowledge, lets you know what others are doing, makes it impossible to hide, makes it easy to ask for help or offer help.

Your business practices should be open as well...



We've practiced something called open books management since I invented the idea in 2001.

(wait for laughs) More people should know about this.

I found out a few years ago that a guy named John Case also invented the idea of open books management in the early nineties.

What this means is every employee understands the financial model of the company, has data on the state of the company, and knows how his or her work impacts the company.

We periodically teach an "Economics of AO" class for new employees and anyone needing a refresher.

At quarterly meetings we review  
profit & loss statement  
sales pipeline

We have radiators for our marketing efforts...



This is our main company dashboard – it radiates information about our blog, utilization, and sustainable pace

It shows metrics that we care about

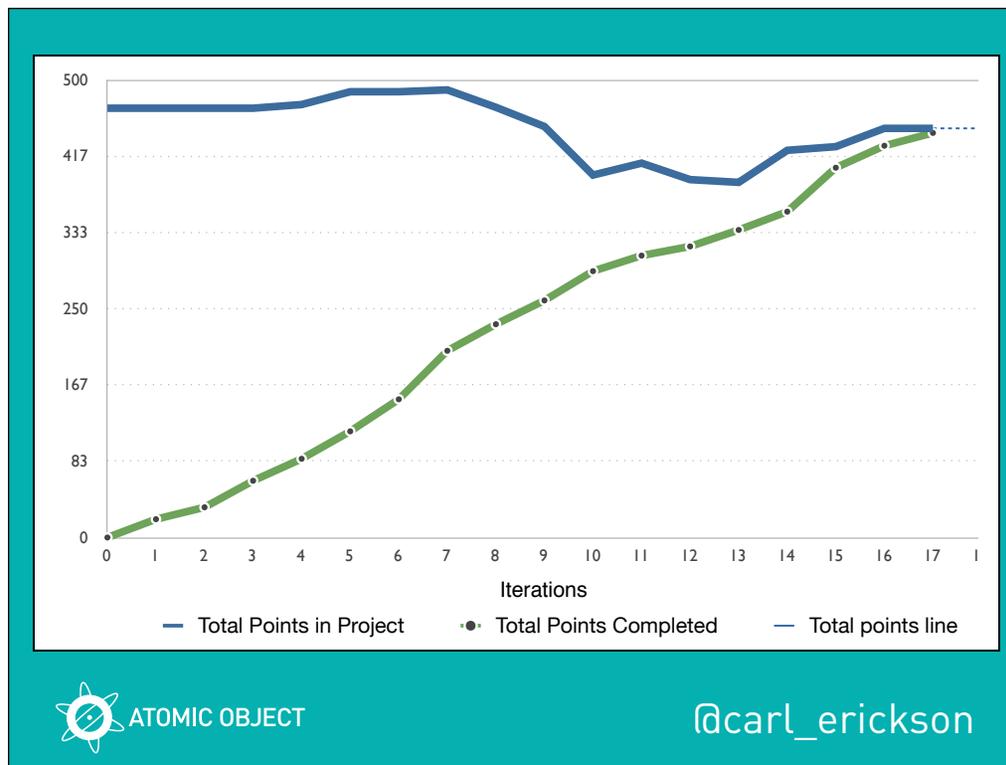
- Utilization – what are people doing, are we staying billable

- Blog Tracker – blogging is a major marketing tactic, are people meeting their personal expectation

- CI aggregate – what are the results of our active projects

- Chart Beat – realtime analytics, what is happening right now on our site

Transparency is particularly important between clients and teams...



They should know who's working on their projects, how much time's been spent, and on what features.

There are vital human connections here:

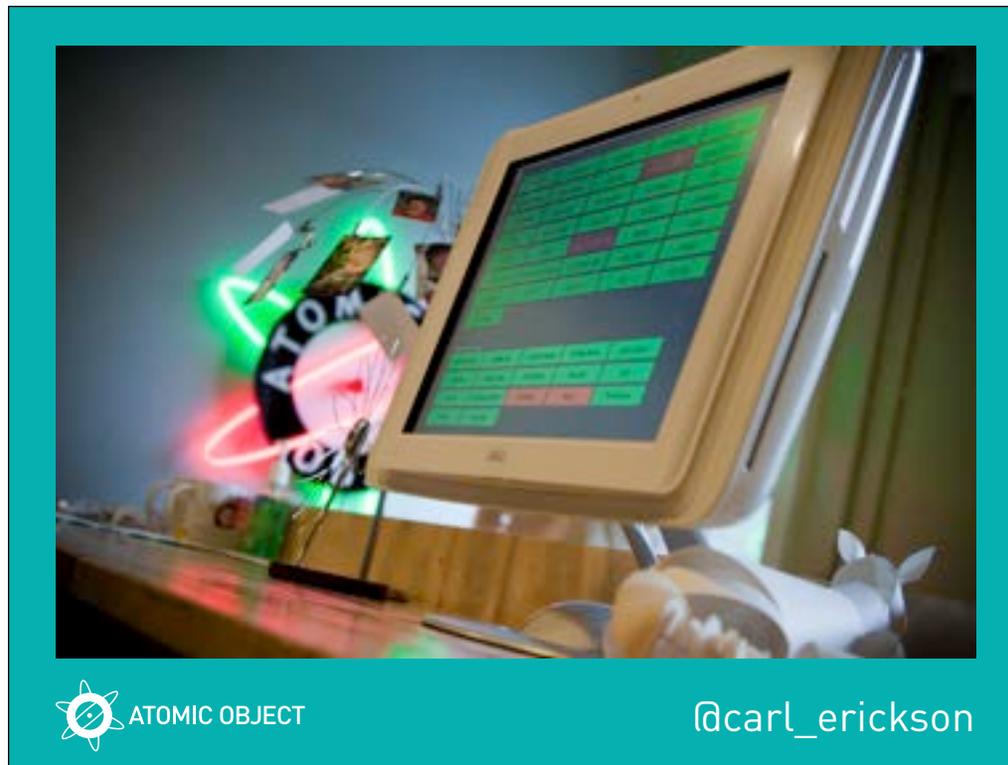
Craftsmen should know for whom they are working.

Clients should know the people creating their products for them.

We show our customers where we are on their projects in time & money every single week

The weekly burn chart shows changes in project scope, historical velocity, projected completion

We radiate project status from our various CI servers...



Teams should know where things stand with their own projects and other team's projects.

Social connections are another common element of companies built for craftspeople...

# friendship



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I think that social connections, or friendships, are going to arise whether you encourage them or not.

Investing yourself socially in your work has some risks associated with it. It's like an investment portfolio over-weighted in one particular asset class: you have a lot of eggs in one basket if your colleagues are also friends.

But it's going to happen whether you like it or not.

They happen because of

- shared values
- common goals
- time spent together

Since innovation services firms are intense places to work, we create intentional time to be social, have fun, blow off steam together.

We foster formal social connections with employees, spouses, and friends through our monthly SpinDown events...



Early on, free beer friday  
Chance to bond, share project stories

Friend pointed out liability  
Talked to the lawyers, got worried (conservative financial bias)

Realized bartenders are insured  
Started bringing in a bartender monthly

Grows up

Still have bonding  
SOs and kids come  
Customers and friends  
Potential hires

Various people organize outings and sport events...



Last year a bunch of us took a 75 mile roundtrip bike ride to a microbrewer on the lakeshore

We go out to events together...



I think this was a Tigers game

The fact that I don't know makes me happy. Our events are not mandatory, they are self-organizing and quite diverse.

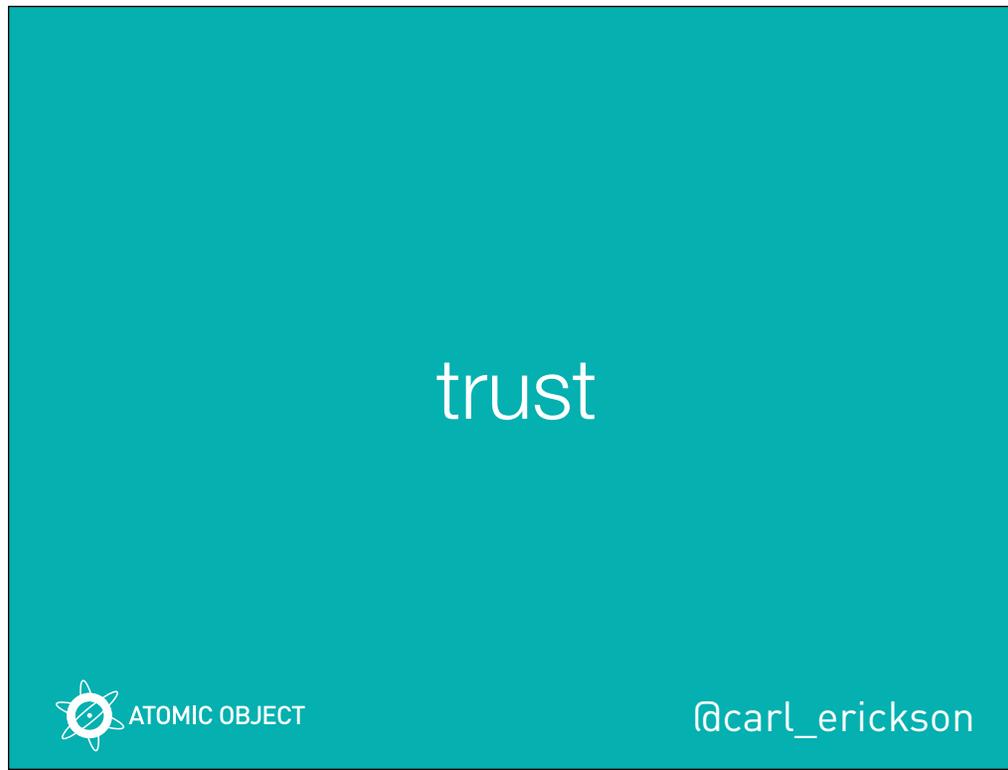
To celebrate our 10th birthday we took the whole company up to a historic inn on Lake Michigan to celebrate...



This was not only a lot of fun, it gave us a chance to tell stories, bring new Atoms into the culture, strengthen existing bonds, and build some new ones.

We've always encouraged spouses to participate in the company social events. I've been doing even more lately to keep them connected to the company, extending a sort of "family" model.

The last element of our model that I wanted to touch on is trust...



(By the way, trust is really hard to come up with images to illustrate)

I see multiple layers of trust in our model

There's the trust that the employees have in the owners to treat them fairly, share the gains of the collective work, and shepherd the company responsibly.

There's the trust exhibited between colleagues on a team to pull their weight, share the pain, do good work, and not sully their reputation.

There's the trust that the leaders have in their employees and teams to fulfill the expectations of clients...

trust



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There's the trust the clients have that their teams work hard to deliver value and maintain quality.

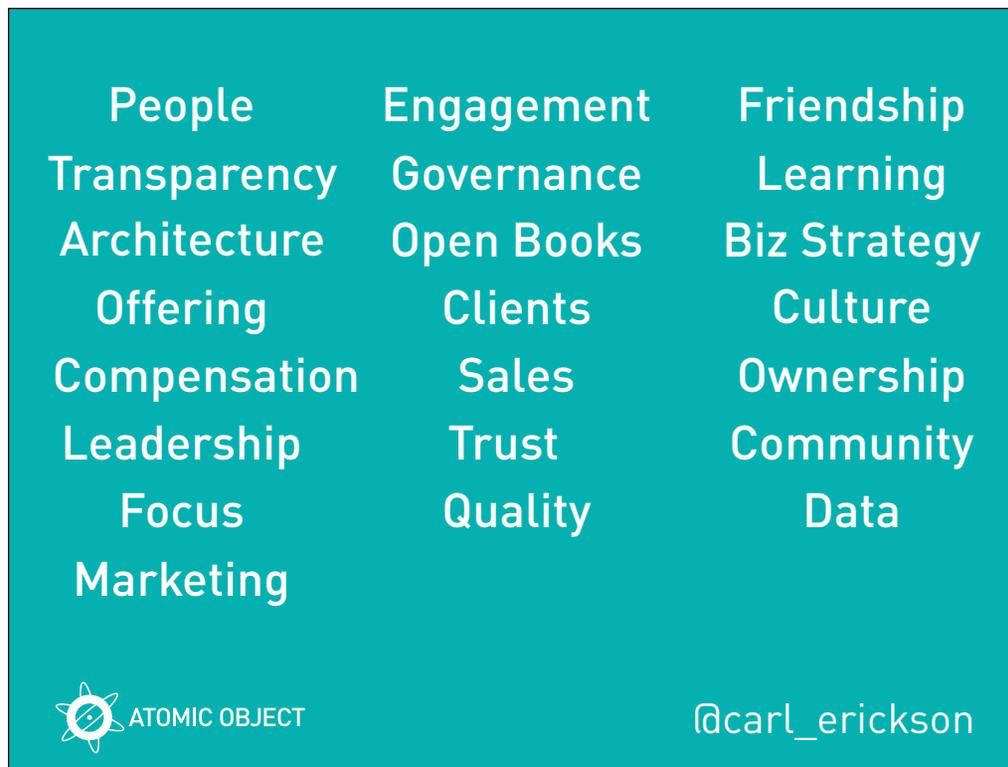
There's the trust that the team has in the clients to allow them to do their work professionally and to not blame them for things no one could anticipate.

One of the reasons that growing these kinds of companies is difficult is that it is difficult to scale trust.

Trust is earned slowly and can be destroyed quickly.

Transparency creates opportunities to build trust. It keeps you honest, so to speak, when as a leader you might be tempted for the sake of expediency to do something that could undermine trust.

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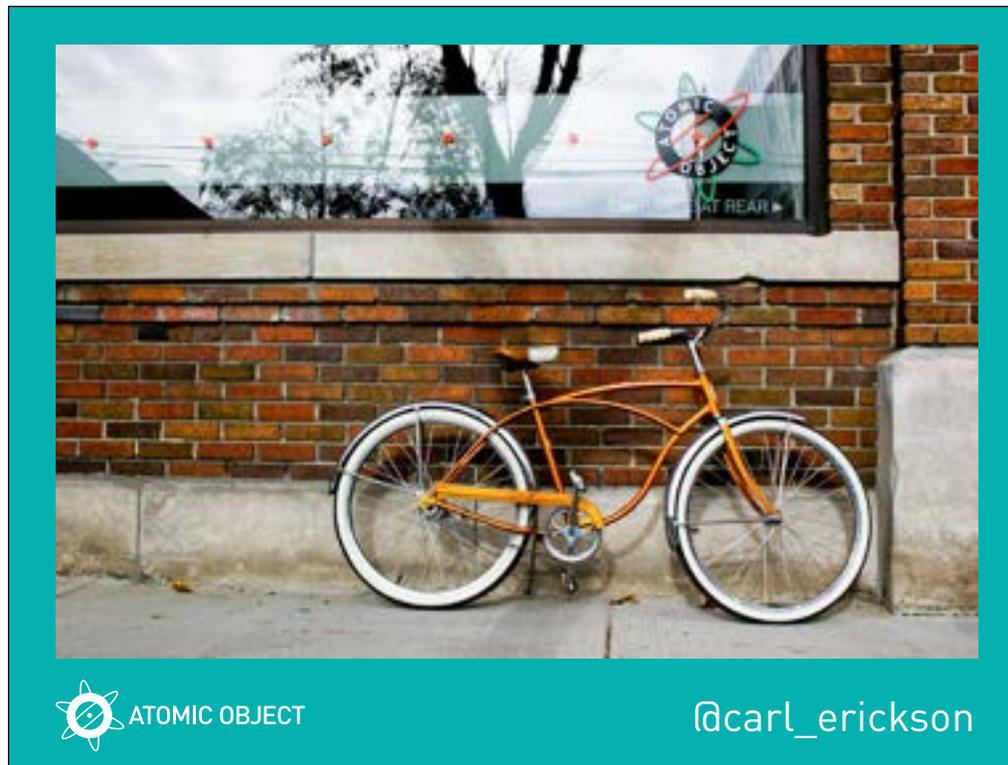


Those are the common elements I've found at companies built for craftspeople:

transparency  
culture  
trust  
friendship

I'd be happy to stop here, or take questions

(don't forget closing slide)



I hope sharing our model has been interesting.

I have three suggestions to leave you with.

You could

- bring some of these ideas into your company or team
- find one of these companies to work for
- start your own
  - to make more great companies for craftspeople
  - to help the economic competitiveness of your communities

Thank you