alcion

Alcion.ai Engineering Culture and Best Practices

This deck, just like the company, will always be a work in progress. Feedback appreciated!

If you haven’t, read the company culture deck first. This deck drafts off that.

Why do we care so much about our culture?

Culture is strategy

JIM COLLINS

Author of Good To Great

IN ENGINEERING CULTURE, WE TRUST

Enables us to outcompete others

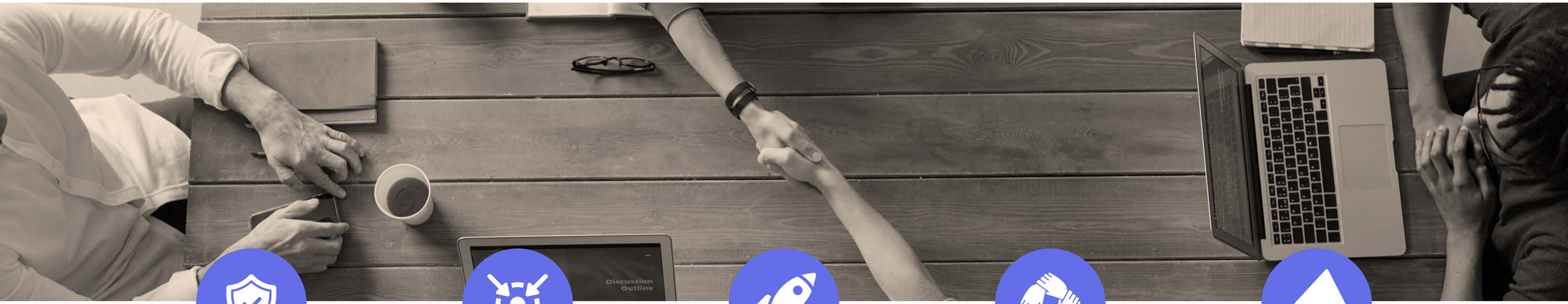
With a shared cultural outlook, the engineering team will be able to move faster and in the same direction. It will allow us to be hyper-efficient. This cannot be easily replicated.

Helps build a successful team

Our culture will allow us to define our values. These values set us up for long-term success, define our individual behavior, attract amazing coworkers, and will be used to promote and reward.

BUILD SMART

ENGINEERING BEST PRACTICES



Security-First

Thinking Long Term

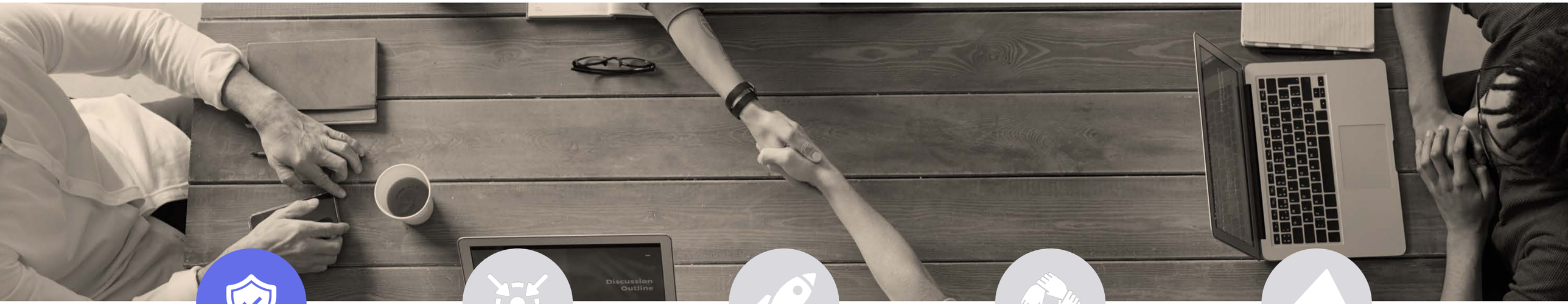
Speed and Agility

People Growth

Team Communication

BUILD SMART

ENGINEERING BEST PRACTICES



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An engineering team that values and cares for security will achieve far better outcomes than an engineering team that doesn't care---hiring in security will not change that.

DEVDATTA AKHAVE

Head of Security, Figma

SECURITY FIRST

Protect From Data Breaches

We need to invest in tooling, documenting best practices, and education to prevent ransomware, cloud misconfiguration, and credential compromise

Building a Secure Product

Focus on tools and best practices for the common attack vectors: authz, authn, dependency updates, supply chain compromises, and pen testing

Customer Requirements

Follow best practices for building both the product and infrastructure from the beginning to ease certifications such as SOC2. Have tests for customer-driven RBAC roles to prevent regressions and leaks.

See https://devd.me/log/posts/startup-security/

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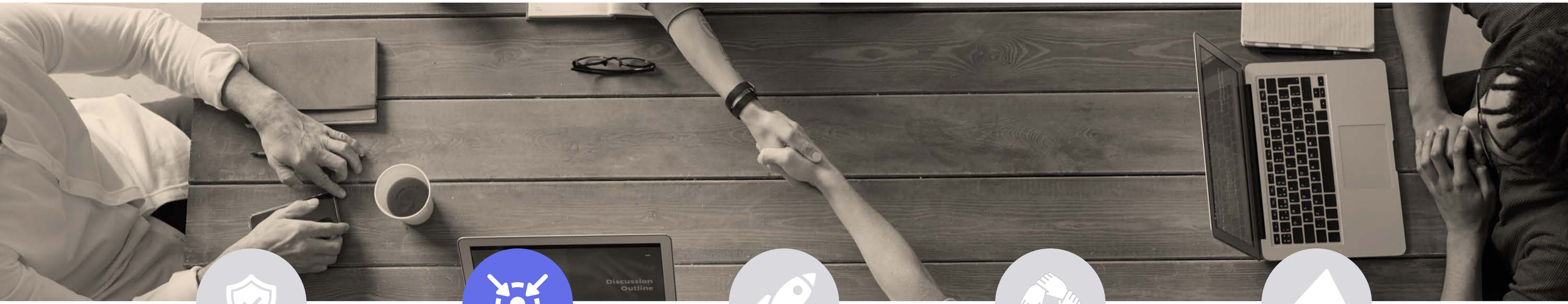

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Someone is sitting in the shade today because someone planted a tree a long time ago

WARREN BUFFET

CEO, Berkshire Hathaway

Keep it Simple, Stupid

KELLY JOHNSON

Aircraft Engineer, US Navy

THE KISS PRINCIPLE

Applies to Everything We Do

We need to make things as simple as possible, but not simpler. This will allow for faster extension and new feature addition

Reduces Tech Debt

A simple system is significantly easier to build, extend, maintain, debug.

Increases Team Velocity

Faster for new team member to become productive contributors.

No Premature Optimizations

Reducing premature and unnecessary optimization allows focus on what is most important.

THINK LONG TERM

Keep Technical Debt In Check

Incurring tech debt is a conscious decision and with plans to pay it off. Also, not all tech debt is created equal. We need to manage it!

Continuous Refactoring

Refactoring and improvement will help reduce accidental complexity and pay off tech debt. We need to continuously devote time and resources to this.

Design for Extensibility

While we shouldn’t over-engineer, think about known future use cases for whatever we are design and build simpler systems to allow for that.

THINKING LONG TERM: CODE QUALITY

Uniform and High Code Quality

We emphasize this to help new people come up to speed faster. Also helps the current team switch between different parts of our code base.

Explicit Code Quality Expectations

Use automation to prevent bike shedding. Enforcing the same code style is just the start. We reuse common design patterns wherever possible too.

Code Reviews are Critical

All code changes involve a PR. There are no direct commits to the main development branch, no matter the pressure.

THINKING LONG TERM: CODE REVIEWS

Enforcing Code Reviews

We review everything, including “trivial” changes. This helps share knowledge, common design patterns, increases visibility, and catches issues early.

Code Reviews Should Be Small

We try our best to keep code reviews small to increase signal-to-noise ratio and reduce reviewer burden. This will also speed up your review latency and prevent this:

THINKING LONG TERM: AUTOMATION

Critical for Agility

We ship features early and often for a relatively complex distributed system. We cannot do this without investing in automation.

Test Must Be 100% Automated

We will be shipping multiple times a week. This is impossible if there are any manual tests involved, no matter how tempting it might be to do it “just once.”

Only Use CI/CD pipelines

There will be no manual builds or deploys. There is too much risk to our brand and, more importantly, our customers if we ever do that.

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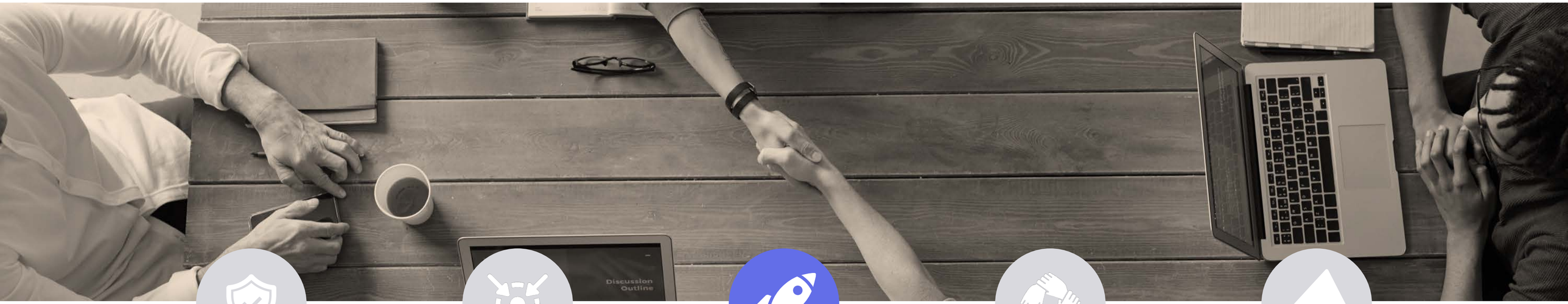

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Speed, agility, and responsiveness are the keys to future success

ANITA RODDICK

Founder, Businesswoman, Activist

SHIP QUICKLY

Critical for Success

Being able to deliver features faster and evolve in the eyes of the customer are going to be critical to both our and our user's success

Ship Often

We want to ship weekly (and ideally daily) but we do not believe in moving fast and breaking things. We also don't believe in death marches but instead in predictable delivery.

Invest to Make This Easy

As mentioned earlier, we want to invest early and heavily in automation, automated tests for high code coverage, and in general infrastructure that increases confidence in our product and reduces friction in shipping quickly.

RESPONSIVENESS AND OWNERSHIP

Collective Responsibility

We are all collectively responsible for our product. This means blameless postmortems if things go wrong and everyone stepping up if customers are impacted.

See Something? Do Something!

If you see a problem, including customer problems, and can quickly fix it, don’t wait for permission or approval. Raise the issue if it’s a larger item. Applies to everything non-engineering too.

Individual Responsibility

Ultimately, all engineers own the code they write. When developing, be defensive so that you don’t get paged at 2 AM to support it.

AGILITY AND INTERRUPTIONS

Optimize for Asynchronous Work

Don’t work in a synchronous mode where you need to interrupt others. This will allow folks to have large blocks of uninterrupted time for focus and “flow.”

Reduce Meetings

We have very few standing meetings and reduce the need by using alternate mechanisms that work just as well (wiki, mailing lists, etc.)

Responsible Responsiveness

Ensure you have a personal SLA to respond to your team members including a short latency on code review requests, providing required information, and knowledge transfer

The NIH syndrome (Not Invented Here) is a disease

LINUS TORVALDS

Creator of Linux

BUILD VS BUY

Focus Efforts on Core Business

We choose to focus most of our effort on features that are meaningful to our business or core to a superior experience for our customers.

Buy Services For Acceleration

For undifferentiated heavy lifting (e.g., billing, dashboards, observability), we should pay, within reason, for services to solve the problem for us.

Factor In True Cost of OSS

Even if OSS software is readily available, we use a managed service version of it. Unless core to our business, we avoid trying to run and manage it ourselves.

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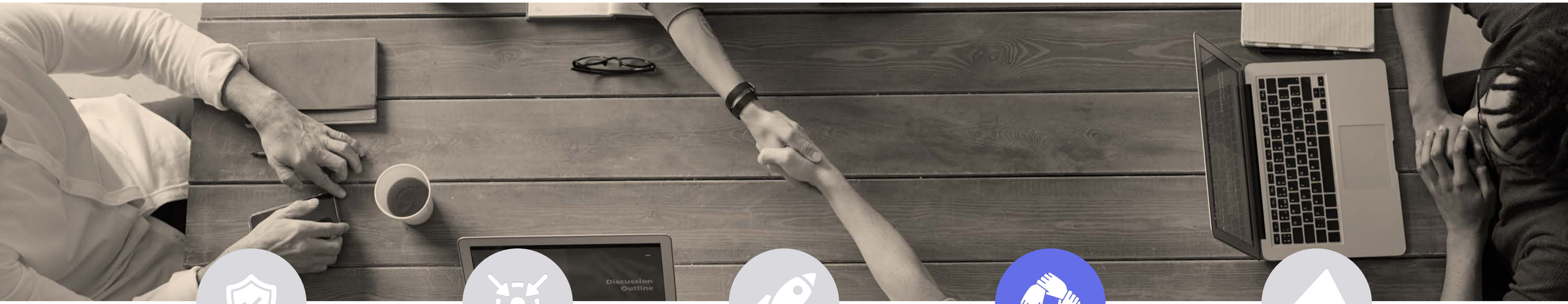

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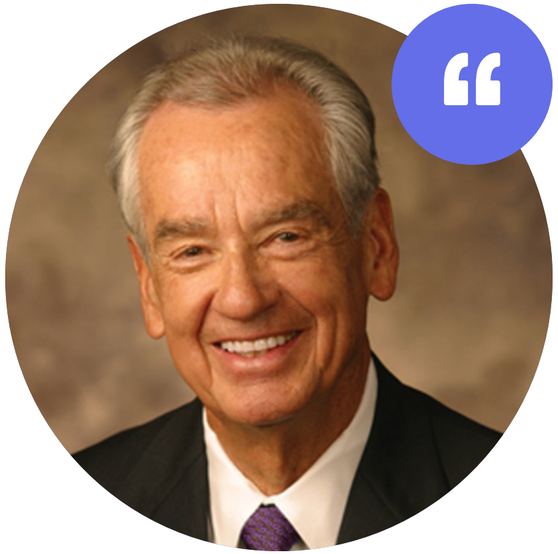
You don’t build a business. You build people, and people build the business.

ZIG ZIGLAR

Author, Speaker



INVESTING IN PEOPLE

It’s About Career Growth

We focus on career growth and acceleration that would be very hard to find elsewhere. We aim to grow leaders and do not focus on titles.

Focus on Areas of Growth

We expect folks to grow in the technical complexity of problems solved, depth in new technology, and related non-tech skills (communication, leadership, networking, etc.).

Increasing “Market Value”

We commit to helping people get to the next step in their career and not just internal advancement. Ideally within the company but, if not possible, we will open doors externally too.

PROMOTING FROM WITHIN

Investing In The Current Team

We invest in and grow leaders and managers from within the company. Signs folks are starting to “punch above their weight class” is a great indicator.

Reward The Right Behavior

We recognize and reward behavior that moves the needle for the company vs. the individual person. This is often reflected in “invisible” work that makes the entire team more productive and efficient.

Don’t Use 💩 Metrics

We don't measure productivity or performance in easy-to-game or artificial metrics (e.g., # PRs, # bug fixes, LoC, etc.). We document and recognize “moving the needle.”

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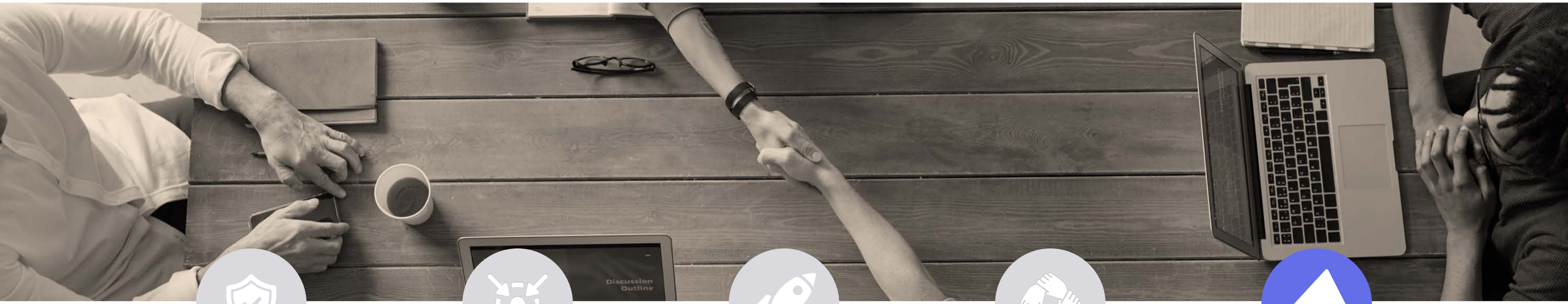

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If it is not written down, it does not exist

PHILIPPE KRUCHTEN

Professor, University of British Columbia

COMMUNICATION VIA DOCUMENTATION

Capture Anything Non-Trivial

In a remote-first company, we must document anything non-trivial for information sharing and decision making. We invest in tooling for this.

Clarity of Communication

We put effort into clearly communicating not just the subject at hand but also provide necessary context to put the discussion in perspective

Public Documentation

Err on the side of over-sharing and over-documentation and do this in public spaces. Wiki pages and public mailing lists and channels are highly encouraged over private chats and emails.

DOCUMENTATION INTERNAL & EXTERNAL

Critical for Agility

Internal documentation will help get others up to speed, help communicate your ideas, ease code reviews by providing necessary context, and more.

Critical for User Success

We need to clearly document the concepts behind and the use of our products to enable user-driven adoption, customer happiness, and self-service

Needs to be Engineered

Documentation, just like our code, must be reviewed via PR processes, have automated style and language checkers, and be automatically generated, and published using CI/CD pipelines.

RESPONSIBILITY FOR OUR CULTURE

We (and that means **you**) are all torch bearers for our culture

We Are Hiring!

alcion.ai

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