Setting A Culture of Technical Excellence

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Agenda

- Define Technical Standard

- Hire for Standard

- Preserve the Standard

Disclaimer

Content and Opinion expressed here is solely mine, and stems from my experience in and observations of the industry

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Having worked for startups as well as larger, more established companies, and in different geographical areas, I am presenting my views on the matter. Please absorb them only from that viewpoint.

Define Tech Standard - Not the Culture!

Culture should evolve as the company expands, and hiring inducts more talent. However, what should remain should be the high technical standards. This will ensure any evolution of culture is in the best interest of the company at the time.

Startup Focus - What Is Yours?

Everything starts right here. If every member of the organisation knows the end goal and keeps it in sight, then progress will be fast and aligned. Otherwise, there cannot be traction. Do you know what your focus is?

Point focus. OK not to have a plethora of features or products. Doing just one thing really well, that is where competition will lose out.

Engineering Hiring - Case Studies

"There's no one kind of Googler, so we're always looking for people who can bring new perspectives and life experiences to our teams. If you're looking for a place that values your curiosity, passion, and desire to learn, if you're seeking colleagues who are big thinkers eager to take on fresh challenges as a team, then you're a future Googler."

–*Google, How We Hire*

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"At a high level, we care about three things when considering whether to hire an engineering candidate. Can they build software? Can they learn and teach? Are they aligned with our values?"

- Hiring, Medium Engineering

"How we do our work -
We innovate, experiment, and move at a fast
pace. We're a learning organization with a
growth mindset, and we're always looking for
ways to improve our product and ourselves."

Hiring, Twitter

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Another Example
Software Engineer - Startup

- Required Skills

  - 10+ years of related work experience is required.

  - ……

- Education

  - BSCS/CE is required MSCS/CE is preferred.

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This particular startup was a spin-in. Therefore, the goal was to bring out the product and merge back in. The only thing that was required of hires was the ability to code and code fast with good quality. Building a rich culture isn't the goal of hiring here. That will be the parent company's domain.

Exotel is a small sized startup but the 30-40 people who have helped build this company have all been honest, happy, hard-working & humble people. We are really proud and honoured to be working with all of these folks.

-Hiring for Start-Ups, Exotel

- Passion and Perseverance

- Diversity

- Desire to Learn and be Creative

- Competence

- Entrepreneur Spirit

- Leadership

- Team Spirit

- Background and Experience

- Align with the Business Goal

- Perfectionists …

A combination of these attributes (in no particular order) are desired at workplaces. Some parameters depend on each other while others are developed as a natural progression. Technical standards should define the priority of these attributes in a potential candidate, as well as for the team as a whole.

Hire for Standard

People - Don't compromise. Only hire the best. They will take care of the culture.

Software Competency

Everybody is expected to be hands on in a technology startup. Therefore, evaluate one and all on their coding. There are two ways to do this. One is on the interview. The second is to give a take home challenge and evaluate the code on completion of the challenge. It is easier for both the candidate and the company to gauge each other based on this technical challenge alone.

Does the solution address the original problem?

How well is it designed?

Does the code correctly implement the design?

How performant is the code in space and time?

Is the author able to explain the logic?

Is the author able to answer related questions on improving the solution?

The evaluator must be able to extend the problem and evaluate the candidate on deeper concepts of computer science. For example - can there be further optimisation to the running time of the program? What is the space complexity of the solution?

A bird sitting in a tree is not afraid of the branch breaking, because her trust is not in the branch, but in her own wings.

tinybuddha.com

Ability

Adapt

Can think of system design
Can apply concepts to areas not familiar with

Perseverance

- Wants to find solutions
- Doesn't give up
- Sees personal growth in challenge

- Communication

- Honesty and Trust - What are the basic moral values of this person?

- Strong beliefs

- To the point and precise

- Being Empathetic

- Knowledge Sharing

- Taking Responsibility

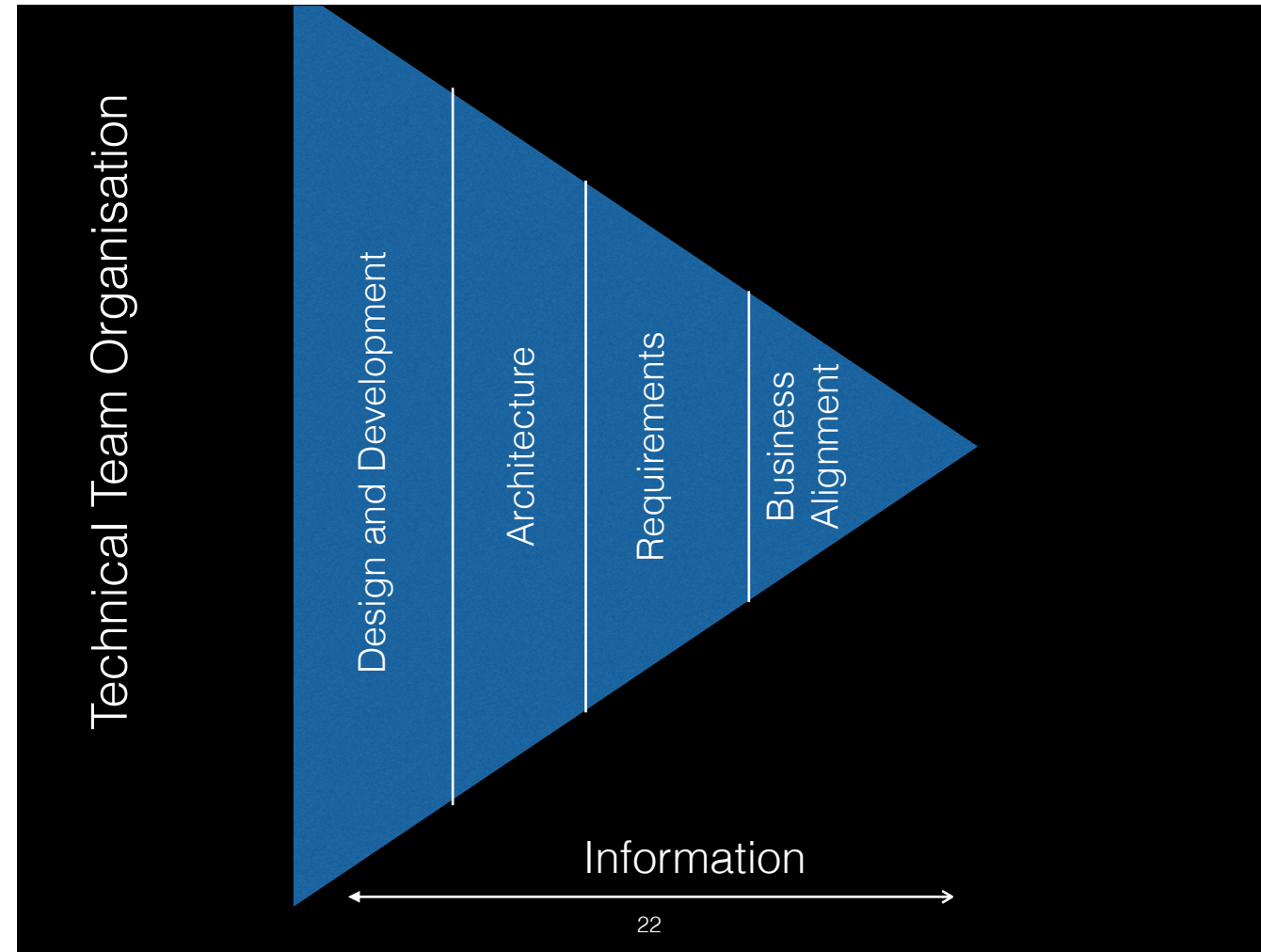So, do they see your focus and understand why?

Preserve Standard - The Dream Team

Numbers, numbers - If there is one thing engineer's love, it is this. Define metrics. Measure and quantify goals. Measure progress towards the numeric goal.

Technical Team Organisation

Design and Development

Architecture

Requirements

Business Alignment

Information

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Every layer is as important as the other. The pyramid is only to indicate the number of people required, on an average, for each of these roles.

Transparency

Make sure end-to-end program management. Information should percolate down to every employee. Direction of company

Requirements - Not a One-Way Street

- Sales and Project Managers
- Engineers and Engineering Managers

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Let the ideas flow - Take inputs from engineers that might be a wonderful idea. The next Tesla might just be an idea sitting in an engineers head. Mix and match feature requests coming from field versus the non-functional requirements or ideas coming from engineers.

Demo

- Top Down

- Bottom Up

- Every stakeholder is aligned!

Applaude - Sincerely

Support and Appreciation - Small cheers matter. Applauding, impromptu fun and excitement should all be in a day's work. Don't wait for the annual appraisal!

Build Domain Experts

Too soon, especially in India, more experienced members of the team become managers. That is the natural progression. Therefore, there is a serious dearth of domain experts, leading to poorer quality and experience of the product. Encourage senior folks to remain technical. Don't hire managers. That can come from within the team. Managers with no technical expertise spell doom.

Teach and Learn!

Learning from community - Conferences, interact with the technical community. Present your work and help the community to gain from your technical know-how!
Blog posts, open source code, conferences, meetup events.

Trust - First and the Only Effective Process!

Small teams really need no processes. Everybody knows (almost) everything. There is camaraderie. There is honest and open communication. Strengths and weaknesses of team mates is known and accepted. The focus is razor sharp.

Trust them to deliver. Give them a problem statement and exit the room. Trust is the first process, and perhaps the most effective one, you'll ever need!

"The stronger the culture, the less corporate process a company needs"

–Brian Chesky, Co-founder, CEO, Airbnb (via Medium)

Dunbar's Number for Social Interactions.
Steve Jobs about Beatles.

Dancing to the right tunes! Motivated Passionate individuals - Bring the right energy in. Workplace should be full of positive energy where people do their best.

Expanding the Team?
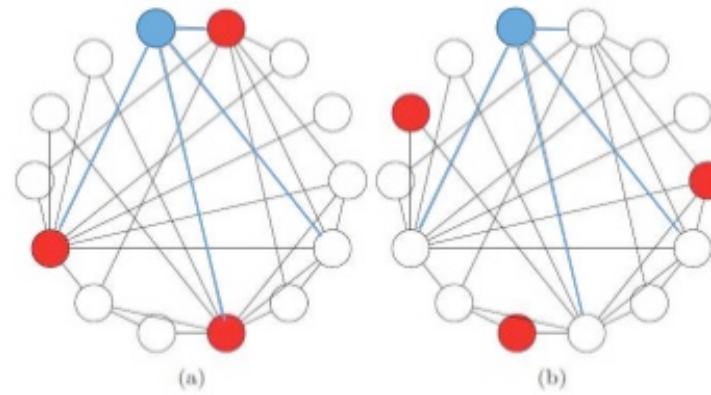# Bring In Majority Illusion

FIG. 1. An illustration of the "majority illusion" paradox. The two networks are identical, except for which three nodes are colored. These are the "active" nodes and the rest are "inactive." In the network on the left, all "inactive" nodes observe that at least half of their neighbors are "active," while in the network on the right, no "inactive" node makes this observation.

Courtesy : http://www.finnpr.com/majority-illusion-how-minority-popular-people-influence-majority

Graph Theory to the Rescue

- Everybody around has standards

- Trust and partnership

- Ownership

- High Quality Deliverables

- Communication

The node will be excited once it crosses the threshold!

A majority of teammates of the new hire will exhibit the highest of standards. The new hire is forced to match up to the high standards. Once the threshold of acceptance is crossed, new hire will absorb the standard. Now this new hire may also be a seed to setting standards for later hires! Only ensure there is no mass hire, else this formula might not work too well. Do it right, start with one domain expert and end up with many! What else do you wish for?

References

- [Medium's engineering interview process -](#)

- [The Majorty Illusion - How Minority Popular People Influence Majority](#)