Whatfix

Engineering Leveling System

Update History

Version	Date	Updated by	Remarks
1.0	December 5, 2022	Vara Kumar	Document Drafted & Circulated
1.1	January 24, 2023	Gaurav Bali	Whatfix Branding Updated

Whatfix is building a new category of software, That means a lot of innovation has to happen. We want to build an environment where engineers can go deeper, iterate faster, make thoughtful design/architecture decisions, own the system end to end (requirement to monitoring).

We have built a set of guiding principles around which we have created an Engineering leveling system. Leveling system shows the growth path for our engineers.

Scope/Impact & Behaviors.
Levels are described by the scope covered by the engineer & impact made. Along with the behaviors that are expected to be exhibited, Behaviors are grouped into categories like ownership, technical execution, team building, Customer First mindset.

You can be technical & grow.
Movement to management is not considered to be a promotion. It is a different role. Similarly an architect role is a different role. An engineer can choose to be a hands-on coder & solve deeper technical problems & grow as a distinguished engineer..

Engineering management is technical.
Managers can not make right decisions without understanding technology. It is not enough for a manager to be a people & process person. Managers need to know enough to be able to contribute in design or code reviews, Be able to communicate with other teams.

Prove first before level up.
Level up happens only after an Engineer is able to prove that he/she has already operated at the new scope & demonstrated the impact expected. Level up does not add additional responsibilities, Level up happens only after additional responsibilities are already handled. It is not mandatory that each & every behavior is exhibited but needs to prove that all categories are covered.

All engineering work streams are treated equally.
Levels are the same across different streams of engineering, No separate expectations per stream (Frontend, Backend, Data, Devops, SRE, QA etc). The criteria of level up is exactly the

same, Engineers need to handle bigger scope, make larger impact & show right behaviors to grow irrespective of their work stream.

Years of experience is not mandatory to level up.

Years of experience is required to master anything, It is not enough to be able to do it once, It has to be repeatable. For instance, You can estimate accurately once but that is not sufficient, there has to be consistency & uniformity in being able to estimate well. Minimum 1 year of experience in the current role is required to be considered to level up apart from that there is no minimum years of experience requirement for any level. The years of experience is only a guidance to set expectations.
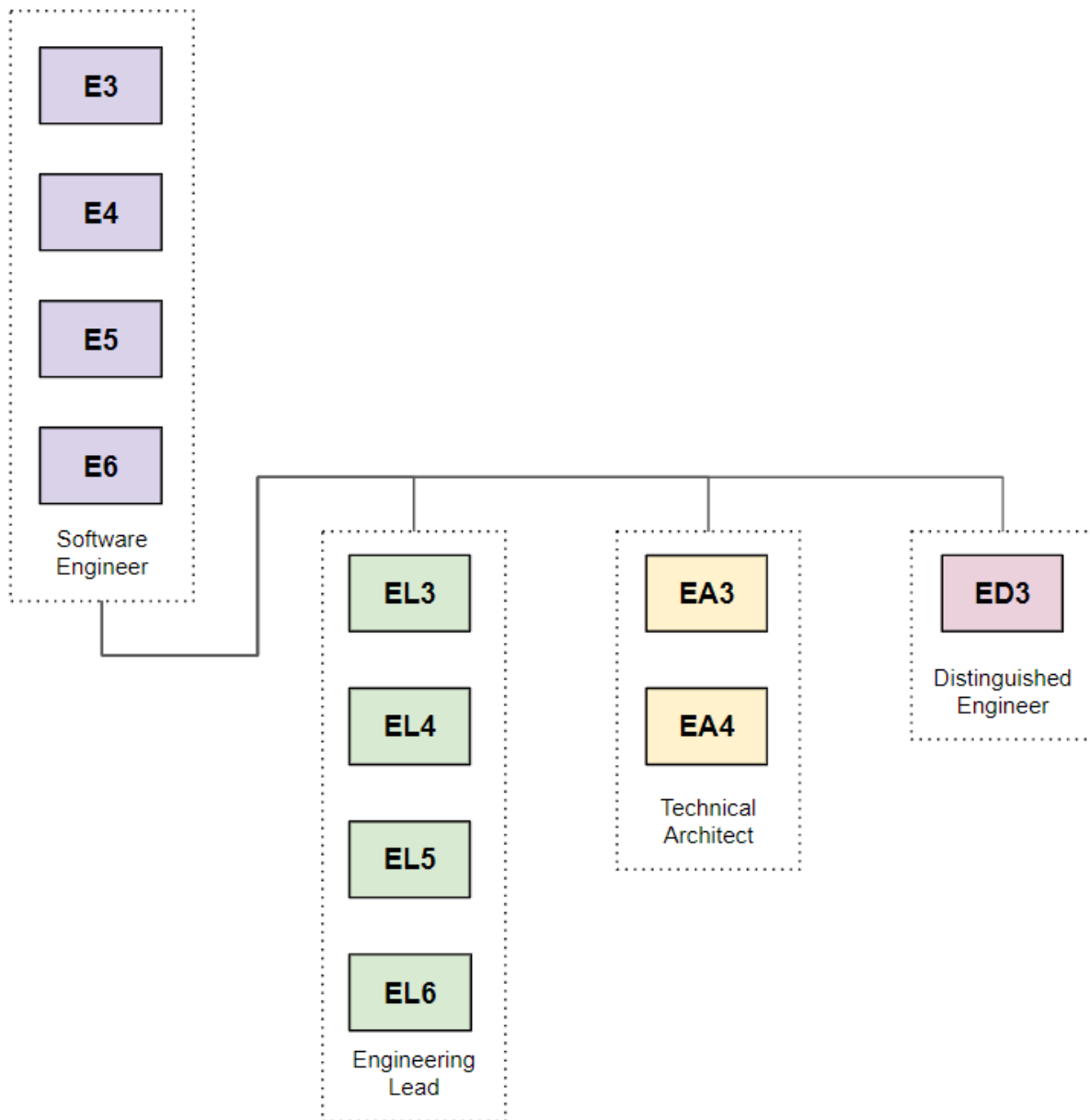
Our interests change.

It is not compulsory to stick to managerial or architectural or distinguished paths, You can shift between these areas. A distinguished engineer might develop interest to pursue engineering leadership. The levels can not be compared between engineering paths or with other departments (For instance, There is no comparison between ED3 & EA3, Both are two different expectations).

Levels are additive.

Every level is additive of all previous levels. Responsibilities of all previous levels expected when you are at a level.

Thankful to Square, Khan Academy & Fog Creek for sharing their leveling systems. We adopted most of Square's philosophy of leveling.

Levels

Software Engineer	Engineering Lead	Technical Architect	Distinguished Engineer
E3	EL3	EA3	ED3
E4	EL4	EA4	
E5	EL5		
E6	EL6		

Expectations from each level has been detailed out here:

- Software Engineer
  - **E3**
  - **E4**
  - **E5**

- ○ **E6**
- Engineering Lead
  - ○ **EL3**
  - ○ **EL4**
  - ○ **EL5**
  - ○ **EL6**
- Technical Architect
  - ○ **EA3**
  - ○ **EA4**
- Distinguished Engineer
  - ○ **ED3**

Typical experience: A new engineer with potential. Typically a person's first or second full time engineering job.

Scope & Impact: Writes, tests, and documents code according to Engineering standards and practices.

Technical Execution
- Debugs and fixes issues in development, test, and production
- Participates in software design for features and bug fixes under direct supervision.
- Participates in code reviews.

Collaboration
- Asks for help as appropriate and learns from it.
- Contributes to team activities and collaborates within the team to solve problems
- Openly share their opinions. Is open to changing their perspective and plans based on others input

Scope & Impact:
- Designs features with guidance from more experienced engineers.
- Develops, tests, ships, and maintains features independently.

Technical Execution
- Improves the development experience by enhancing development tools, test coverage, and/or code structure.
- Implements & documents code that is clear, concise, tested, and easily understood by others.

Ownership
- Is responsible for the entire lifecycle of their code: development, test, production, support and subsequent fixes and improvements
- Serves as on-call first responder for software their team owns.

Collaboration
- Performs code reviews that follow the standards and practices and that are recognized by their team as helpful.
- Align on the design & code of other teams on the areas where you will need to touch their codebase.

Scope & Impact: Independently responsible for the entire lifecycle of features including design, development, and deployment.

Technical Execution
- Improves code structure and architecture in service of testability and maintainability.
- Writes, co-writes, and reviews design documentation.
- Is highly proficient in one or more technical areas

Ownership
- [Shared] Prioritizes and values unowned or undesirable work that enables the team to move faster

Collaboration
- [Shared] Works with their team and adjacent teams to solve problems. Escalates problems that have wider scope.
- [Shared] Guide other teams in terms of making design choices who are going to touch the code owned by this team.

Team Building
- Assists and teaches other engineers on an individual basis.
- Participates in the hiring process (meeting candidates, attending recruiting events, presenting externally, or writing for Engineering blogs).
- Conducts engineering interviews.

Scope & Impact:

- Leads or significantly contributes to medium-to-large feature releases; usually multi-person projects that cross engineering team boundaries.
- Is a clear expert in one or more technical areas.

Technical Execution

- Is recognized for high quality, impactful technical contributions.
- Participates in the design review process, seeking and providing constructive criticism
- Demonstrates ability to succeed in a wide range of complex situations across multiple axes: e.g. scale, uncertainty, interconnectedness
- [Shared] Monitors and adjusts team pace to instill urgency for success but protect from burnout

Ownership

- Estimates and manages project timelines and risk.

Collaboration

- Builds relationships with stakeholders including customers, product managers, cross-functional partners, and external partners.
- [Shared] Contributes to defining strategic direction, planning the roadmap, escalating issues, and synthesizing feedback to ensure team success
- **[Shared]** Ensures that knowledge is shared amongst the team and does not position themselves or others as a single point of failure.

Team Building

- Mentors multiple engineers.
- [Shared] Works through others. Lifts the skills and expertise of those around them.
- [Shared] Advises manager with insights and recommendations to improve the team.
- [Shared] Recruiting participation increasingly becomes filling open engineering headcount across the company, not just for positions on the immediate team.

Scope & Impact:

- [Shared] Demonstrated success leading large, strategic, or complex areas that have a clear impact on the success of the company.
- Sets architectural direction for the product and helps evolve systems toward it. This includes tech debts & new capabilities.
- Has a track record of influencing and delivering projects with organizational impact and priority.

Technical Execution

- Breaks down complex work into simple systems that can be effectively built and maintained by less experienced engineers in the POD.
- Execute proof of concepts & get conclusions on the architecture.
- Designs and implements systems and frameworks that can succeed long term, not minor increments to solve immediate problems. Drive platformization through architectural choices.
- Demonstrates ability to quickly analyze and resolve tactical issues across a wide variety of areas.
- Has deep product & technical domain knowledge of the company. This can cover product strategy, user personas, apps, services, systems, or frameworks.
- Is considered an expert by peers and is recognized for high quality and quantity of hands-on technical contributions

Engineering Strategy

- Defines technical strategy and executes to improve products, infrastructure, processes, or company.
- [Shared] Influences senior leaders on engineering strategy
- [Shared] Ensures technical designs are properly evaluated for important projects and advises teams to improve execution

Collaboration

- Understand & influence product strategy short & long term by being in touch with customers & understanding competition.
- Review architectures of new/revised capabilities in the company & ensure that those are aligned to the direction of product owned.
- [Shared] Uses negotiation and patience to collaborate with other senior leaders, ensuring progress and setting the example for others.
- [Shared] Collaborates across teams and disciplines to solve problems and resolve technical debate.
- [Shared] Stays aware of changes around the company to anticipate and prevent obstacles from hindering team performance.

Team Building
- [Shared] Mentors other engineers or managers on strategy, collaboration, influence, execution, and other aspects of leadership
- [Shared] Recruiting participation increasingly becomes sourcing, selling, and closing offers for managers, senior ICs, and/or tech leads.

[Shared] with E & EL.

Scope & Impact:
- Develops architecture, libraries and systems with company-wide impact.
- Has and continues to build a track record of strategic work with company-wide, sometimes industry-wide, impact.
- May have management responsibilities for a small number of direct reports.
- [Shared] Impact affects many teams, many products, many customers, and/or a percentage of revenue

Technical Execution
- Influences teams across the company to achieve broader company goals as well as team goals within their organization.
- Is widely seen inside and outside of the company as an expert in the engineering discipline.
- Experiment & drive building frameworks & platforms that simplify development.

Engineering Strategy
- Synthesizes technical designs and architecture in order to advise teams, inform buy vs build decisions, optimize infrastructure costs and evolve company's engineering architecture.
- [Shared] Recognizes, influences, and/or resolves critical issues that may affect the company direction

Leadership & Collaboration
- Has and continues to build a track record of success in leading and coaching large project teams.
- Displays exceptional technical leadership and technical problem solving skills.
- [Shared] Leads the organization to success with little guidance or direction from senior leadership and/or the executive team.
- [Shared] Collaborates with other teams to influence meeting broader company goals

Team Building

- Represents the company as an external spokesperson, networks with people outside the company in related fields.
- [Shared] Works with other leads to set policies and processes that span Engineering.
- [Shared] Actively contributes to broad business strategies, decisions and processes.
- [Shared] Serves as coach and mentor across all of engineering.

Scope & Impact:
- Owned & grew strategic or complex intellectual property of the company. The intellectual property has to be a major differentiating factor for the company in the market.
- Sets technology vision of the intellectual property & new products that company can venture into.

Technical Execution
- Handson & Solved most complex technology problems that made a large impact on the company.
- Demonstrates ability to quickly analyze and resolve tactical issues across a wide variety of areas.
- Has deep technical domain knowledge of the company. This can cover apps, services, systems, or frameworks.
- Recognized as an expert not only by peers and by the industry.
- Published several patents & papers around the intellectual property.

Engineering Strategy
- Defines intellectual property strategy and executes to improve products, infrastructure, processes, or company.
- [Shared] Influences senior leaders on engineering strategy

Collaboration
- Understand & influence product strategy short & long term by being in touch with customers & understanding competition.
- [Shared] Collaborates across teams and disciplines to solve problems and resolve technical debates.

Team Building
- Publicly known for expertise in a technical area, Speaker at events.
- [Shared] Mentors other engineers or managers on strategy, collaboration, influence, execution, and other aspects of leadership

- [Shared] Recruiting participation increasingly becomes sourcing, selling, and closing offers for managers, senior ICs, and/or tech leads.

Scope & Impact:
- Manages a team or two, typically consisting of 4 to 12 direct reports, or even larger if necessary
- Must have the maturity to manage ICs at higher levels than themselves
- Independently responsible for all aspects of people management.
- Has demonstrated the ability to successfully lead people, teams or projects multiple times in different contexts.

Prioritization
- Monitors and escalates issues with team pace.
- Works with team members to define what success looks like so that the positive impact for customers is clear; sets goals, defines metrics, and tracks progress.
- Clarifies ownership and decision making for the team. Delegates ownership of tactical decision-making but maintains responsibility as tiebreaker where necessary.
- Plans & builds enough automation that improves velocity of team and removes manual work.
- [Shared] Prioritizes and values unowned or undesirable work that enables the team to move faster

Technical Execution
- Drives execution by organizing team work, setting goals, right practices and holding the team accountable
- [Shared] Monitors and adjusts team pace to instill urgency for success but protect from burnout
- Empowers team to own the product area end to end including prioritization, development, deployment, monitoring, and supporting customers. Empowers team members to own their work.

Technical Excellence
- Upholds a high technical bar while making pragmatic tradeoffs.

- Able to represent and be accountable for the technical output of the team including design/architecture adherence, either through personal expertise or strong communication lines with senior engineers

Coaching & Development
- Independently responsible for coaching, development, and career management: setting performance expectations, career planning, performance reviews, managing low performers, compensation reviews, promotions, and terminations.
- Resolves interpersonal and technical conflict within and outside the team.
- [Shared] Works through others. Lifts the skills and expertise of those around them.

Leadership
- Sets direction for the team on a regular cadence in partnership with their manager & be data driven in setting direction for the team.
- Communicates strategy, rationale, and progress within the team and to external stakeholders.
- Communicates and organizes cross-team goals and projects.
- Can lead and function effectively in the face of change, uncertainty and ambiguity.

Collaboration
- [Shared] Guide other teams in terms of making design choices who are going to touch the code owned by this team.
- Collaborates with stakeholders including customers, product managers, and others in development and execution of the team's roadmap.
- [Shared] Contributes to defining strategic direction, planning the roadmap, escalating issues, and synthesizing feedback to ensure team success
- [Shared] Ensures that knowledge is shared amongst the team and does not position themselves or others as a single point of failure.

Team Building
- Independently plans and executes changes to team staffing in service of company goals: identifying gaps, defining roles, and managing team size.
- [Shared] Recruiting participation increasingly becomes filling open engineering headcount across the company, not just for positions on the immediate team.

[Shared] between IC & EM.

EL4

Scope & Impact:
- [Shared] Demonstrated success leading large, strategic, or complex areas that have a clear impact on the success of the company.
- Manages multiple teams and managers, or has a track record of influencing and delivering projects with company-level impact and priority

Prioritization
- Works with managers to define their team's goals by clarifying and maintaining consistency with larger organizational goals.

Technical Excellence
- [Shared] Ensures technical designs are properly evaluated for important projects and advises teams to improve execution.
- [Shared] Influences senior leaders on engineering strategy

Coaching & Development
- Coaches engineering manager aspirants and ICs, for succession planning and growing the organization.
- [Shared] Mentors other engineers or managers on strategy, collaboration, influence, execution, and other aspects of leadership.

Leadership
- Represents goals, metrics, and successes to senior leadership for all teams reporting into this manager.
- Works with and through managers to set team vision, mission, and strategy and the positive impact for customers.

Collaboration
- [Shared] Stays aware of changes around the company to anticipate and prevent obstacles from hindering team performance

- [Shared] Uses negotiation and patience to collaborate with other senior leaders, ensuring progress and setting the example for others.
- [Shared] Collaborates across teams and disciplines to solve problems and resolve technical debates.

Team Building
- Plans the retention, growth of their organization and scales the team.
- [Shared] Recruiting participation increasingly becomes sourcing, selling, and closing offers for managers, senior ICs, and/or tech leads

Scope & Impact:
- Manages a product line that directly impacts the company's success. The product line can consist of multiple teams, high impact teams, emerging teams, or teams of large size / scope;
- Direct reports typically consist almost entirely of managers.
- Ownership includes multiple products, features, tools, or infrastructure.
- [Shared] Impact affects many teams, many customers, and/or a percentage of revenue

Prioritization
- Effectively prioritizes work across teams to maximize impact on the company's success.
- May own budgeting for their projects, both from a people allocation standpoint and from a dollar standpoint.
- [Shared] Influences teams across the company to achieve broader company goals as well as team goals within their product line.

Technical Excellence
- Works with other leads to set policies and processes that span Engineering.
- [Shared] Recognizes, influences, and/or resolves critical issues that may affect the company direction

Leadership & Collaboration
- Works with senior leadership and/or the executive team (Core) to align the division's team vision, mission, and strategy with the company as a whole.
- Positively motivate, influence & inspire teams for best possible outcomes.
- [Shared] Leads the product line to success with little guidance or direction from senior leadership and/or the executive team
- [Shared] Actively & proactively contributes to broad business strategies, decisions and processes.
- [Shared] Collaborates with other teams to influence meeting broader company goals.

Coaching & Development

- [Shared] Serves as coach and mentor across all of engineering.

Organization Building & Hiring
- Designs their product line to maximize impact and respond to the changing needs of the business, Won't mind making transformational changes if necessary.
- Builds autonomous teams that can function without high levels of oversight.

Scope & Impact:

- Management is largely strategic and implemented through direct reports who manage teams directly or through the next level reports.
- Ownership includes a broad strategic asset of the company like products & product lines.
- Impact and decisions affect the entire company

Prioritization & Execution

- Works with the team to create and adhere to a budget for the organization.
- Communicates strategy and process decisions made by executive team to disseminate to their organization

Technical Excellence

- Finds opportunities to improve the entire org, through process, product, tools, or people

Leadership & Collaboration

- Manages relationship with executive team and assists with managing relationship with the Board.
- Ensures teams within organization are collaborating successfully to execute on company goals

Company Building & Hiring

- Influences organizational design across the company to minimize friction and maximize productivity.
- Plans headcount for the organization and oversees allocation to best achieve goals of the broader team.

Coaching & Development

- Coaches new managers.

Frequently Asked Questions (FAQs)

1) **Is there a direct mapping which exists between different levels (eg. EL3 to EA3)?**

   There is no direct mapping available between different paths within Engineering. All movements between paths will be based on the fit with the leveling criteria & availability of such a role (Like regular IJP program).

2) **How will we map employees in case they want to move to a different career role / Business Unit (eg. Engineering role to Product or Design role)**

   All such movements will be driven by hiring requirements and individual's fit into the aspired role. Hiring manager needs to evaluate, review & decide the levels.

3) **How often do we revisit the criteria of levels?**

   The document is expected to be a living document & all of us are expected to comment/recommend changes to it.