Engineering Manager Essentials

Handouts from the workshop as delivered by Patrick Kua (@patkua)

Pat Kua's Team Lead Test

Tick the statements below that you **<u>strongly agree</u>** with.

- ☐ Is your team regularly delivering value (to customers and the business)?
- ☐ Is the team delivering a quality product?
- ☐ Are people on your team growing?
- ☐ Are people on your team engaged and contributing to their fullest?
- ☐ Do people outside the team (e.g. peers, other departments) enjoy working with you?
- ☐ Are stakeholders/your manager well-informed and find you communicate well?
- ☐ Does your team pass the "Holiday Test?"
- ☐ Does your team support each other in their day-to-day work?
- ☐ Is your team continually improving?
- ☐ Do team members proactively solve issues and take work without being asked?

How many ticks do you have out of 10? _____

Gallup® CliftonStrengths® Themes

Achiever	People exceptionally talented in the Achiever theme work hard and possess a great deal of stamina. They take immense satisfaction in being busy and productive.
Activator	People exceptionally talented in the Activator theme can make things happen by turning thoughts into action. They want to do things now, rather than simply talk about them.
Adaptability	People exceptionally talented in the Adaptability theme prefer to go with the flow. They tend to be "now" people who take things as they come and discover the future one day at a time.
Analytical	People exceptionally talented in the Analytical theme search for reasons and causes. They have the ability to think about all of the factors that might affect a situation.
Arranger	People exceptionally talented in the Arranger theme can organize, but they also have a flexibility that complements this ability. They like to determine how all of the pieces and resources can be arranged for maximum productivity.
Belief	People exceptionally talented in the Belief theme have certain core values that are unchanging. Out of these values emerges a defined purpose for their lives.
Command	People exceptionally talented in the Command theme have presence. They can take control of a situation and make decisions.
Communication	People exceptionally talented in the Communication theme generally find it easy to put their thoughts into words. They are good conversationalists and presenters.
Competition	People exceptionally talented in the Competition theme measure their progress against the performance of others. They strive to win first place and revel in contests.
Connectedness	People exceptionally talented in the Connectedness theme have faith in the links among all things. They believe there are few coincidences and that almost every event has meaning.
Consistency	People exceptionally talented in the Consistency theme are keenly aware of the need to treat people the same. They crave stable routines and clear rules and procedures that everyone can follow.
Context	People exceptionally talented in the Context theme enjoy thinking about the past. They understand the present by researching its history.
Deliberate	People exceptionally talented in the Deliberative theme are best described by the serious care they take in making decisions or choices. They anticipate obstacles.
Developer	People exceptionally talented in the Developer theme recognize and cultivate the potential in others. They spot the signs of each small improvement and derive satisfaction from evidence of progress.
Discipline	People exceptionally talented in the Discipline theme enjoy routine and structure. Their world is best described by the order they create.
Empathy	People exceptionally talented in the Empathy theme can sense other people's feelings by imagining themselves in others' lives or situations.
Focus	People exceptionally talented in the Focus theme can take a direction, follow through and make the corrections necessary to stay on track. They prioritize, then act.
Futuristic	People exceptionally talented in the Futuristic theme are inspired by the future and what could be. They energize others with their visions of the future.

Harmony	People exceptionally talented in the Harmony theme look for consensus. They don't enjoy conflict; rather, they seek areas of agreement.
Ideation	People exceptionally talented in the Ideation theme are fascinated by ideas. They are able to find connections between seemingly disparate phenomena.
Includer	People exceptionally talented in the Includer theme accept others. They show awareness of those who feel left out and make an effort to include them.
Individualization	People exceptionally talented in the Individualization theme are intrigued with the unique qualities of each person. They have a gift for figuring out how different people can work together productively.
Input	People exceptionally talented in the Input theme have a need to collect and archive. They may accumulate information, ideas, artifacts or even relationships.
Intellection	People exceptionally talented in the Intellection theme are characterized by their intellectual activity. They are introspective and appreciate intellectual discussions.
Learner	People exceptionally talented in the Learner theme have a great desire to learn and want to continuously improve. The process of learning, rather than the outcome, excites them.
Maximizer	People exceptionally talented in the Maximizer theme focus on strengths as a way to stimulate personal and group excellence. They seek to transform something strong into something superb.
Positivity	People exceptionally talented in the Positivity theme have contagious enthusiasm. They are upbeat and can get others excited about what they are going to do.
Relator	People exceptionally talented in the Relator theme enjoy close relationships with others. They find deep satisfaction in working hard with friends to achieve a goal.
Responsibility	People exceptionally talented in the Responsibility theme take psychological ownership of what they say they will do. They are committed to stable values such as honesty and loyalty.
Restorative	People exceptionally talented in the Restorative theme are adept at dealing with problems. They are good at figuring out what is wrong and resolving it.
Self-Assurance	People exceptionally talented in the Self-Assurance theme feel confident in their ability to take risks and manage their own lives. They have an inner compass that gives them certainty in their decisions.
Significance	People exceptionally talented in the Significance theme want to make a big impact. They are independent and prioritize projects based on how much influence they will have on their organization or people around them.
Strategic	People exceptionally talented in the Strategic theme create alternative ways to proceed. Faced with any given scenario, they can quickly spot the relevant patterns and issues.
Woo	People exceptionally talented in the Woo theme love the challenge of meeting new people and winning them over. They derive satisfaction from breaking the ice and making a connection with someone.

Coaching Toolkit

Active Listening

- Active listening Is listening <u>without a solution</u> in mind or trying to work on solving the situation
- Practise active listening by concentrating on specific words or phrases.
- Practise active listening by observing if the intent/body language matches the words
- Ask a question and give space to answer (be comfortable with silence)
- Confirm your understanding with paraphrasing (i.e. "Let me confirm I understood you. I heard … Is that right?")
- Listen for different types of conversations:
    - Observations - e.g. "I saw Jamie do some work not on our team backlog"
    - Feelings - e.g. "I'm frustrated with working with JIRA"
    - Opinions - e.g. "We need to rewrite our email notification system."

GROW Model

Goal - What is the objective? What is the problem being solved? What does the coachee want to achieve and why?

Reality - What is happening now? What are the constraints preventing them from reaching their goal? Are there systemic or other conflicts that prevent them from reaching their goal?

Options - What are the possible next steps or options the coachee can take? What are the pros/cons of each option? What other alternatives have not been considered?

Way Forward - What will the coachee do next, and by when? When should the coachee review progress?

Questions

Open vs Closed

Open questions open up the conversation and avoid biasing the response. An example might be, "How might you approach this situation?" Or "What were you concerned about in this situation?"

Closed questions guide the response with answers such as yes/no or a set of options. An example might be, "Do you like our current code review process?"

Relationship vs Fact

Use relationship-focused questions to establish and build rapport between people, such as "How has your week been so far?" Or "What's currently on your mind?"

Fact-focused questions focus on the task or discussion at hand. An example might be, "What did you do to release your work into production quickly?"

Too many fact-focused questions might feel very transactional. Too many relationship-focused questions might feel very fluffy.

Scale Based Questions

Scale-based questions are useful for testing the intensity of opinions. An example might be, "I heard that you are frustrated. How frustrated are you, on a scale of 1-10, where 1 is 'a bit', and 10 is 'I'm about to quit, frustrated.'?"

Futuristic Questions

These questions are useful for helping someone get "unstuck" with the current constraints/rules or issues. An example would be, "Imagine you had a magic wand. If you could wave your wand, what would your ideal solution look like?"

Scope-focused Questions

The coach's role is not to provide solutions or take action. These questions guide the action back to the coachee. An example might be, "What can you do to influence this situation?"

Feedback Tips

Purpose

Effective feedback should serve only two purposes:
• Strengthen confidence
• Improve effectiveness
of **the recipient**.

If you are giving feedback for any other purpose (e.g. blame, to vent, to help you, then it is likely to be ineffective feedback

SBI

Effective feedback follows the SBI structure:
• **Situation** - A specific, recent example such as "Last week in our team meeting", "In this morning's design session". Avoid absolutes such as "always", "never", etc
• **Behaviour** - A description of what you might observe/hear such as "You spoke clearly" or "You paused to help Charlie". Avoid character or trait descriptions such as "nice", "aggressive", "rude", etc.
• I**mpact** - Describe the impact from your perspective using "I"-language such as "I felt frustrated", "I think the other team was very happy", etc

Other tips

• Agree as a team on a time/place you can exchange feedback
• Ask "When is a good time to give you feedback?" - Don't assume you should give feedback in the moment.
• Remember that feedback is a gift. Sometimes gifts are wrapped poorly, unwanted, or not so useful for the recipient. Be prepared some people may not respond to feedback.
• Giving and receiving feedback are skills that require practice.

Project Aristotle

Source: https://rework.withgoogle.com/print/guides/5721312655835136/

The researchers found that what really mattered was less about who is on the team, and more about how the team worked together. In order of importance:

1. Psychological safety

Psychological safety refers to an individual's perception of the consequences of taking an interpersonal risk or a belief that a team is safe for risk-taking in the face of being seen as ignorant, incompetent, negative, or disruptive. In a team with high psychological safety, teammates feel safe to take risks around their team members. They feel confident that no one on the team will embarrass or punish anyone else for admitting a mistake, asking a question, or offering a new idea.

2. Dependability

On dependable teams, members reliably complete quality work on time (vs the opposite - shirking responsibilities).

3. Structure and clarity

An individual's understanding of job expectations, the process for fulfilling these expectations, and the consequences of one's performance are important for team effectiveness. Goals can be set at the individual or group level, and must be specific, challenging, and attainable. Google often uses Objectives and Key Results (OKRs) to help set and communicate short and long-term goals.

4. Meaning

Finding a sense of purpose in either the work itself or the output is important for team effectiveness. The meaning of work is personal and can vary: financial security, supporting family, helping the team succeed, or self-expression for each individual, for example.

5. Impact

The results of one's work, the subjective judgement that your work is making a difference, is important for teams. Seeing that one's work is contributing to the organization's goals can help reveal impact.

Premortem Exercise

Background

Your team is responsible for customer growth and onboarding. This includes customer sign-up, account creation, and acquisitions from other channels. Although your platform is aimed at everyday users, your CEO just internally announced a government partnership.

This partnership will allow government employees to purchase without creating a user account with payments invoiced to their corresponding agency/department ledger. Note that your team is not responsible for the payment/purchasing process, just the onboarding.

To enable this, your team will need to integrate a government system called PeopleLedger which lists current employees, their departments, and employee details. There are three organisations you need to coordinate with to successful integrate PeopleLedger:
- **Innovatech** - An external consultancy that operates and makes any changes necessary to the PeopleLedger system.
- **Secuacess** - The security team who authorise and approve network access and ensures partners adhere to government regulations and security
- **Talentron** - The government department responsible for HR processes.

Your CEO would like to launch this new partnership in three months time.

Your challenge

Discuss the situation in your group. Focus on three things that might go wrong that will prevent your team from being successful. Build an action plan on what you can do to maximise your chances of success.

Action Plan

3 day

Action Item

3 week

Action Item

3 month

Action Item

Further Resources

A list of books and online resources connected to this workshop. If you don't like reading books, you can find audiobook equivalents of most of these listed below.

Engineering Management

- **Become an Effective Software Engineering Manager: How to Be the Leader Your Development Team Needs by James Stainer** (https://geni.us/7avN8w) - A practical book outlining the common activities and tools for engineering managers.
- **Behind Closed Doors: Secrets of Great Management by Johanna Rothman and Esther Derby** (https://geni.us/pSpg) - A practical book with lots of stories with ideas on delegating, goal setting, doing 1-1s and more.
- **An Elegant Puzzle: Systems of Engineering Management by Will Larson** (https://geni.us/ORwTm) - A book of opinionated advice from a person who's played everything from Engineering Manager to Director across many modern tech firms.
- **High Output Management by Andy Grove** (https://geni.us/mDqi) - A personal management guide from Intel's famous CEO. Often regarded as a highly-praised guide to engineering management.
- **Making of a Manager: What to Do When Everyone Looks to You by Julie Zhuo** (https://geni.us/NWTBlx) - A good introduction to when you first step into a management role and how that changes from a VP of Product Design from Facebook
- **Management 3.0 by Jurgen Appello** (https://geni.us/04LBk) - A set of interactive exercises and tools for managing with a modern empowering mindset.
- **The Manager's Path by Camille Fournier** (https://geni.us/YnCBCvK) - A concise guide to looking at different leadership and management roles in a modern technology company from an EM all the way to a CTO.
- **Managing Humans by Michael Lopp** (https://geni.us/rUSuyqJ) - A collection of entertaining tales dealing with people situations within technology companies written by the author of Rands in Repose.
- **Managing the Unmanageable by Mickey Mantle et al** (https://geni.us/iPs6LZJ) - A very specific book on engineering management that really considers how managing developers changes the way you manage.
- **Multipliers: How the Best Leaders Make Everyone Smart by Liz Wiseman** (https://geni.us/CVSWc) - Describes how the actions of leaders can either drain or amplify the ability of the people they lead.
- **Peopleware by Tom DeMarco** (https://geni.us/FDNs) - A timeless book about IT management.

- **Project Oxygen** (https://rework.withgoogle.com/guides/managers-identify-what-makes-a-great-manager/steps/learn-about-googles-manager-research/ - Google's research into what makes an effective manager at Google.
- **Resilient Management by Lara Hogan** (https://resilient-management.com/) - A short, clear, simple handbook with great actionable tools for people managers.
- **Start With Why: How Great Leaders Inspire Everyone To Take Action by Simon Sinek** (https://geni.us/GbmnyLo) - Discusses how to create a vision by creating compelling reasons that people can contribute to and have fulfilling work.
- **Talking with Tech Leads by Patrick Kua** (http://thekua.io/twtl) – A collection of interviews with Tech Leads from various backgrounds and industries sharing their stories and approaches to being a Tech Lead EM.
- **Turn the Ship Around! By L. David Marquet** (https://geni.us/8GZF) - A great book that talks about the leadership style that changed one of the worst-performing ships in the US navy to one of the best.

Communication

- **Crucial Conversations Tools for Talking When Stakes Are High by Kerry Patterson et al** (https://geni.us/7WJd4H) – A step-by-step manual on when and how to approach difficult conversations with people.
- **Difficult Conversations: How To Discuss What Matters Most by Roger Fisher et al.** (https://geni.us/PlSIA6) - Takes a deeper view as an individual navigating conflict by understanding the multi-layered conversations - "What Happened", Feelings and Identities.
- **Discussing the Undiscussable: A Guide to Overcoming Defensive Routines in the Workplace by William R. Noonan** (https://geni.us/XcD8) - Understand where defensiveness comes from and a set of tools on how to handle this.
- **Facilitator's Guide to Participatory Decision-Making by Sam Kaner** (https://geni.us/RebrrYy) – Details facilitation approaches that can be used collaboratively – involving other people and leads to a more significant commitment.
- **Humble Inquiry: The Gentle Art of Asking Instead of Telling by Edgar H. Schein** (https://geni.us/IhuKtk) - When we tell people what we think they need to know, it shuts them down. Instead, draw on humble inquiry as described in this book.
- **Radical Candor by Kim Scott** (https://geni.us/426BW) - Communication tips to focus on being direct and empathetic. Helpful in being clear, giving feedback, and maintaining good relationships with people.

- **slide:ology: The Art and Science of Creating Great Presentations: The Art and Science of Presentation Design by Nancy Duarte** (https://geni.us/z9PP) - Duarte's consulting company helps CEOs and other keynote speakers build powerful presentations and slide designs to support their presentations. This book contains a lot of the wisdom they share time and time again.
- **The Story Factor: Inspiration, Influence, and Persuasion through the Art of Storytelling by Annette Simmons** (https://geni.us/QMvbV1U) - Learn how to tell great stories which can improve your ability to influence.
- **Talk Like TED: The 9 Public Speaking Secrets of the World's Top Minds by Carmine Gallo** (https://geni.us/l8xV6e) - Insights into how people are trained to deliver world-class talks at the famous TED conference.

Influence, Change and Consulting

- **Driving Technical Change Why People on Your Team Don't Act on Good Ideas, and How to Convince Them They Should by Terrence Ryan** (https://geni.us/AyQC9wA) - A book more technical folk should know about that takes the pragmatic approach to show you how to influence when driving technical change.
- **How to Win Friends and Influence People by Dale Carnegie** (https://geni.us/HAdblr) - An oldie but a good book that talks about some principles of influencing.
- **Fearless Change: patterns for introducing new ideas by Mary Lynn Manns and Linda Rising** (https://geni.us/bfZz) - A set of 48 patterns (described like software patterns) of successfully introducing change. Consider this as a way to grow your toolkit.
- **Flawless Consulting: A Guide to Getting Your Expertise Used by Peter Block** (https://geni.us/eonu) - Often described as the "consultant's bible", this book offers many case studies and practical advice to "getting your expertise used".
- **Influence, New and Expanded: The Psychology of Persuasion by Robert B Cialdini** (https://geni.us/gxXZkpT) - Six principles of how we are influenced in a sales/marketing context.
- **More Fearless Change: Strategies for Making Your Ideas Happen s by Mary Lynn Manns and Linda Rising** (https://geni.us/E1YU) - A follow up of Fearless Change that extends the collection with 63 different change patterns.
- **The Trusted Advisor by David H. Maister et al.** (https://geni.us/qbBaCH) - A book that will help you transform simply being the "expert" to being a trusted advisor of the people around you.

People

- **BICEPS by Paloma Medina** (https://www.palomamedina.com/biceps) - A helpful acronym to remind yourself of the (different) core needs individuals have.
- **The Coaching Habit by Bungay Stanier Michael** (https://geni.us/GsDpBL) introduces an effective coach's role and practices for building coaching skills.
- **The Culture Map: Decoding How People Think, Lead, and Get Things Done Across Cultures by Erin Meyer** (https://geni.us/fAef) - Especially relevant for teams with different backgrounds. It explores the cultural differences that typically lead to misunderstanding or miscommunication across countries.
- **The Difference by Scott E. Page** (https://geni.us/FQJ5) - Describes the power of diversity and the necessary conditions about when it really helps.
- **Drive: The Surprising Truth About What Motivates Us by Daniel Pink** (https://geni.us/hWzLQ) – All leaders should read this book to understand the environment to create to engage people: Autonomy, Mastery and Purpose
- **Hofstede Cultural Dimensions** (http://geert-hofstede.com/) - A website that introduces the idea of cultural dimensions across different countries.
- **Mindset: Changing The Way You think To Fulfil Your Potential by Dr Carol S. Dweck** (https://geni.us/VgnVK) - The book that talks about the Growth versus Fixed mindset and how each mindset helps/hinders performance.
- **Strengthsfinder 2.0 by Tom Rath** (https://geni.us/I2qTz) - Helps you build a better understanding of yourself and others and to understand why taking a strengths-based approach is useful.
- **Thanks for the Feedback: The Science and Art of Receiving Feedback Well by Douglas Stone et al** (https://geni.us/BpZO) - A guide to understanding how to extract useful feedback out of conversations with people.

Personal Management

- **Chesterton's Fence** (https://fs.blog/chestertons-fence/) - An excellent article outlining why and how to use this thinking principle
- **The Daily Stoic: 366 Meditations on Wisdom, Perseverance, and the Art of Living: Featuring new translations of Seneca, Epictetus, and Marcus Aurelius by Ryan Holiday and Stephen Hanselman** (https://geni.us/rATxCh) - This is a very accessible version (one idea a day) to learn about Stoicism.
- **Emotional Intelligence 2.0 by Travis Bradberry and Jean Graves** (https://geni.us/QBkeXe) - Describes strategies for identifying, understanding, and managing emotions in yourself and others.

Teams & Organisations

- **Accelerate: The Science of Lean Software and Devops: Building and Scaling High Performing Technology Organizations by Nicole Forsgren and Jez Humble** (https://geni.us/spMICc8) - A book backed by research from the yearly State of DevOps Report that demonstrates organisational and technical factors that lead to high-performance technology firms.
- **Facilitator's Guide to Participatory Decision-Making by Sam Kaner** (https://geni.us/RebrrYy) – Details facilitation approaches that can be used in a collaborative fashion – involving other people and leads to greater commitment.
- **Lift Off: Launching Agile Projects & Teams by Diana Larsen et al** (https://geni.us/zYtzsHl) – Offers concrete techniques to build team charters and to accelerate the norming phase of a team.
- **The Mix That Matters: Innovation Through Diversity** (https://www.bcg.com/publications/2017/people-organization-leadership-talent-innovation-through-diversity-mix-that-matters) - Research that emphasises which type of diversity makes a difference to innovation revenue.
- **Project Aristotle** (https://rework.withgoogle.com/print/guides/5721312655835136/) - Google's research into what makes a high performing team.
- **Scaling Teams by Alexander Grosse and David Loftesness** (https://geni.us/lq1RyZR) - A concise book looking at everything from hiring, people management, organisation, culture and communication strategies for the modern manager.
- **Team Topologies: Organizing Business and Technology Teams for Fast Flow by Matthew Skelton & Manuel Pais** (https://geni.us/BwnnlEB) - Underscores the trade-offs, benefits and patterns of organisational structures when drawing the boundaries of teams.
- **The Wisdom of Crowds: Why the Many Are Smarter Than the Few by James Surowiecki** (https://geni.us/qpjVzxA) - The research and conditions necessary for better decision-making.
- **The Wisdom of Teams: Creating the High-Performance Organization by Douglas K. Smith et al** (https://geni.us/lP1UN) - A deep dive into what makes a team work or fail.