TEAM KIT

A field guide to the parts of your team you can't see.

ENCORE · iGEM Team KIT · Karlsruhe · 2026



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Introduction

Hey, and welcome to TeamKIT!

Whether you've just joined your team or you've been around for a while, whether you lead a project or you're the person quietly making sure things actually get done — this booklet is for you. Every model, tool, and method in here is about how people understand themselves and each other, and that's something every single person in a team shapes, title or not. If you've ever walked out of a meeting thinking "that could have gone so much better," or wondered why a teammate reacted the way they did, you're exactly who we wrote this for.

How it came to life

As the first iGEM team at KIT, we didn't have much to work with. There was no previous team to ask, no handbook, no "this is how we did it last year." We had to learn and build everything from scratch: the team itself, our understanding of iGEM, our lab, and our network with industry and sponsors. We did all of it on our own!

Of course, this led to problems within the team and challenges we had to overcome. We had to learn how to communicate, how to run meetings that actually work, and how to deal with conflict when it came up.

> **We're not the only team who thought about this**
>
> **iGEM Aarhus 2026** put together their own guide, *iGEM 101*, focused on how the competition itself works and what especially first-time teams should know. We traded feedback on each other's guides and are still in touch. So if our TeamKIT doesn't cover what you're looking for, theirs might :)



How to use this booklet

This is not a book you're meant to read front to back in one sitting (though we won't stop you if you want to). Think of it more as a toolbox you keep nearby: something to open whenever a specific question, challenge, or "huh, that's interesting" moment comes up.

Each chapter stands on its own and follows the same pattern: a model to understand what's going on, something to try, how it shows up in iGEM, and where to go if you want to dig deeper. Consider every chapter a door — you can just peek through it, or you can walk all the way in.

You'll find four parts:

- **Individual** — if you want to understand yourself a bit better
- **Interpersonal** — if you're trying to understand someone else
- **Teamwellbeing** — if you want to keep the whole group on track
- **Prevention** — if things are already tense and you need something now

Jump to whichever part fits your moment. Skip around. Come back later. Lend it to a teammate who needs chapter 4 more than you do right now.

Pages marked with a rectangle are **Intermissions.** We added them to make this document a little easier to read, so you are not overwhelmed by the information all at once :)

Disclaimer

We are students, not psychologists. Models are simplified maps of reality and not the truth. If a topic touches serious distress, please don’t treat this booklet as therapy but reach out to professional support.

We hope you'll find something in here that helps — a model that clicks, a question that opens a conversation, or just the reassurance that whatever you're going through in your team, you're not the first to go through it.

PART 1

Individual

Who am I, really?



Maybe this sounds familiar: You feel like you're the only one frustrated by the endless weekly meeting that doesn't seem to resolve anything. Everyone else seems fine, but it really grinds your gears that the meeting always circles back to the same thing and nothing gets done.

Another example: Your lab mate is working on a totally different project but is still micromanaging your work. You feel angry that they are constantly monitoring you and should mind their own business.

Both situations could easily escalate to conflicts or build up to you holding a grudge. In any case, there is room for improvement regarding the collaboration for both parties.

Let's start with understanding why we feel the way we do. That itself won't resolve the problem, but it helps us be more articulate in what we need when we decide to be open about it. After we understand our own feelings, the conversation may not start with "I hate that you always lurk behind me and watch over my shoulder constantly!" but rather with "I understand that you need to know that everything is going alright, but I need you to trust me that I will ask you if I have any problems. By constantly interrupting me, I feel like my competence is undermined." See the difference?

When we have access to the underlying needs of our behaviour, we can uncover the underlying issue instead of lashing out at people (or holding a grudge) simply because we didn't know any better. So that you don't have to leave a meeting frustrated but can state your need: "I am missing clarity on this topic. I need to know how we are deciding as a group in order to move forward."

That makes the need much more likely to be met. So, let's get to know ourselves!

Values

Understanding what values drive us forward helps us target our goals more precisely, as they help us navigate everyday situations and decisions. They make up our intuitive compass of what we want and strive toward, even if we don't yet know exactly what they are.

Let's say, for example, someone's most important value is clarity. This person is likely to be adamant about driving meetings toward a conclusion, to ask questions that lead the conversation right to what's been avoided, and to be direct in their communication. Harmony or love as a value can make a person caring and empathetic, but also avoidant of conflict.



Values aren't inherently good or bad; they are just underlying motives that have been useful during our upbringing and still influence our decisions today.

So how do we find our values?

There are online tests you can take, and those are a great start, for example the Schwartz Theory of Basic Values, one of the most widely researched value frameworks in psychology. It helps you weigh different values against each other to see which ones mean more to you than others. If you already have an idea of what your values could look like, you could also just look at a list of values and cross out what doesn't apply to you.

But even with a list of values, you still have to observe yourself and introspect to really understand what that means in your life. On the following page there are some questions to guide you and help you see more clearly what values lie inside you.

ASK YOURSELF:

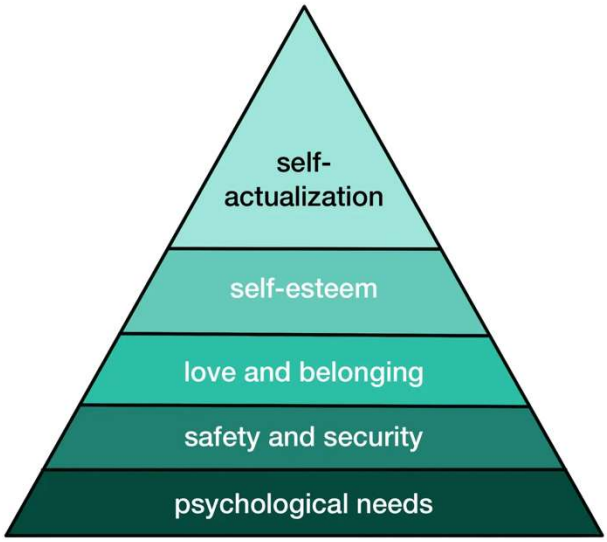
1. Which hobbies bring you joy, and why?
2. What helps you enter a flow state?
3. Who brings out the best in you? Which values would you use to describe them?
4. Is there any aspect of yourself you want to work on more? Why is it important to you?
5. What aspects of yourself are you proud of, and why?
6. When do you get disproportionately irritated? Who has the ability to "press your buttons"? Why is it so disturbing to you?
7. What brings you peace, and how do you recharge?
8. Which things or activities take more energy from you than others?
9. When do you judge others, and for what?
10. Why do you choose the goals you have right now? What do you gain from achieving them?

Answer these questions with the list of values in mind. Do your answers align with the values from the list? Spending some time getting to know your inner world definitely pays off; you might even say that these reflections are very valuable :).

Go deeper*: Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. Online Readings in Psychology and Culture, 2(1).*

Needs

Our behavior is often guided by our needs. There are different theoretical approaches to describe them. Maybe you've seen Maslow's Hierarchy of Needs before:



The first three levels of the pyramid can be definitively achieved or satisfied. Esteem needs and self-actualization needs, on the other hand, can only be strived toward and validated, never fully attained. They are called growth needs. Maslow also suggested that each level of the pyramid is only worked toward once every level below it has been satisfied. Critics disagree with this strict order and also note that the hierarchy is culturally biased. For our purposes, to understand why we behave the way we do, it still offers a good starting point, but let's dig deeper.

Deci and Ryan propose another approach: *Self-Determination Theory (SDT*). In SDT, our motivation toward certain behaviours is driven by three universal basic psychological needs. They are universal in the sense that they apply to every person, regardless of age, gender, or cultural background:

Autonomy	Effectancy	Affiliation
Being able to act freely, following one's own values.	Trusting your own capabilities and feeling able to influence a situation.	Having a social connection you can trust and fall back on; being accepted, loved, and able to love.

If all three needs are satisfied, we can feel growth, integrity, vitality, and simply well. If one or more are not met, this causes frustration, which can lead to varying degrees of demotivation, destructiveness, and fatigue. This often shows up as a change in behavior or

as a substitute need, such as distraction or avoidance. This is why understanding our needs, especially the ones that are unmet, is so important. Not being able to satisfy them results in conflicting, stressful, and sometimes disruptive feelings. If a need keeps going unmet, this can accumulate and result in conflict, resignation, or manipulation.

Nonviolent Communication (NVC) also rests on this idea. As you'll learn in the NVC chapter, NVC starts by exploring the feelings underneath a situation, since they point to which need isn't being met. For example: if someone feels lonely, their need for relatedness isn't satisfied. Loneliness is an uncomfortable feeling, so the person looks for a strategy to meet that need. They might try to attract more attention, for instance by disrupting meetings or barging into other people's conversations.

When we understand why we feel the urge to demand more attention, we can actively choose more constructive behaviors, such as openly talking about it with the team. (If you want to learn how, skip to Nonviolent Communication.)

Understanding this can also help us be more patient with others who act in an irritating way. It gives us a foundation to start a conversation. Instead of shutting a person down, we can open the room for an honest and vulnerable exchange. "What do you need?" rather than "Stop this!" shows that you're trying to help your teammate move forward instead of pushing them to suppress their discomfort. You're not responsible for fulfilling their need, but most of the time it already helps just to feel seen and to be given space to reflect on what's really going on.

> **Go deeper:** *Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. Canadian Psychology, 49(3), 182–185.*
>
> *Maslow, A. H. (1943). A theory of human motivation. Psychological Review, 50(4), 370–396.*

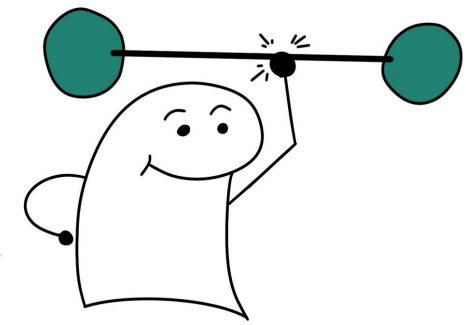
Strengths

Penguins look really silly waddling on land. The sky is off limits to them, even though they have wings. In water, it's a whole different story: they reach very high speeds and should be feared, if you're a fish. A penguin doesn't focus on trying to fly to catch prey or escape predators; it moves in the way that comes easiest to it.

This is why, like penguins, we should concentrate on what we can do best, rather than focusing on our "shortcomings". This is easier said than done, since our environment sometimes demands skills from us that we have to develop if we want to succeed in it. Nevertheless, we achieve more growth when we invest in our strengths, which is why it's important to know them. This online test is free to take: https://www.viacharacter.org/

This model is based on the work of Martin Seligman and Christopher Peterson, who spent years studying philosophical texts, religious traditions, and cultural wisdom from around the world to find character strengths that are valued across time and cultures. The result was a classification of 24 strengths, grouped under six broader virtues: Wisdom and Knowledge, Courage, Humanity, Justice, Temperance, and Transcendence. Everyone carries all 24 strengths to some degree, but usually three to seven of them stand out as your so-called "signature strengths": the ones that feel most natural, energizing, and authentically you. Research shows that regularly using these signature strengths, rather than trying to be equally good at everything, has the strongest link to wellbeing and satisfaction (Seligman et al., 2006).

Knowing our strengths can also help us actively choose environments that promote what comes easiest to us. This knowledge can help you figure out which tasks you want to take on or which roles to volunteer for.



Maybe you already knew your strengths. This could be a great moment to take time and reflect on if and where you're already making use of these strengths in your life.

ASK YOURSELF:

1. Does your day-to-day life have room for you to apply your strengths? Where?
2. Which roles should you take on more often to develop your fortes?
3. What encourages you the most to rise above yourself? How can you combine this with your strengths when planning toward your goals?
4. How do your values align with your strengths?
5. Which strengths lie underneath your shortcomings?

This exercise can go even further: if you share and compare strengths within your team, you can figure out where your team's strengths lie. This can help you decide on a project or on which direction to take your team. You might also discover that for a given task you're still missing a required strength. This could lead you to either look for teammates who can help close that strength gap, or it could give you the opportunity to actively develop that know-how as a team. Being aware of your strengths, and of which strengths a given situation needs, can be key to choosing the right project or adjusting to the circumstances you're in.

Look out: "Strengths" is generally a broader term than "competences"; the two aren't the same. Your competence could be efficiently assembling furniture or writing comprehensive lists, while your underlying strength is "structured thinking." When figuring out your strengths, it's sometimes easier to start by writing down your competences and then clustering them to find the more abstract strengths behind them.

Go deeper: *Cloninger, C. R. (2005). Character Strengths and Virtues: A Handbook and Classification. American Journal of Psychiatry, 162(4), 820-a. https://doi.org/10.1176/appi.ajp.162.4.820-a*

Motivation



This is the Japanese concept of **Ikigai**. It roughly translates to “what gets you up every morning”. It describes the intersection of what the world needs, what you love, what you’re good at, and what pays you an income. This chart is usually used when someone wants orientation about which direction to take their career in. We can use the same principle to narrow in on our purpose within a project. If we want to determine our purpose as a group, we can swap “what pays you an income” for “what makes this project successful.”

If you want to decide for yourself what your purpose in this project is, swap that section for “what I can contribute to the project’s success.” While often presented as ancient Japanese wisdom, the four-circle diagram itself is a more recent Western interpretation (popularized by Marc Winn in 2014, building on an earlier diagram by Andrés Zuzunaga); the underlying idea of ikigai as a reason for being is genuinely Japanese, but the visual model is a later addition.

Once you fill it out, you’ll have a reminder of what you’re doing this for. This is especially helpful during stressful phases. Hang it somewhere you’ll see it often, and be reminded of your purpose.

What if purpose isn’t enough?

Knowing your purpose isn’t a cure-all for a lack of motivation. It can also help to build in small rewards along the way, both for yourself and for the whole team. Maybe you could tie certain group activities (a trip, going out, a potluck, a game night) to milestones you’re working toward.

Another option is gamification: set up rules for how many points each recurring task earns (just be careful not to interfere with roles you’ve already agreed on). Logging a meeting, clearing the dishwasher, restocking consumables, and so on can all earn points. This can make mundane tasks more fun, and before you know it, the workspace stays tidy without anyone having to be asked. :D

Quick Motivation Thoughts

1. Fixing frustrations doesn't necessarily create drive (Herzberg)

Frederick Herzberg asked employees what sparked enthusiasm at work versus what caused deep dissatisfaction, and found two fairly separate sets of answers.

The dissatisfying side centered on the working environment: broken equipment, poor pay, rigid rules, weak leadership, messy spaces. The motivating side was about the task itself: reaching milestones, having autonomy, feeling valued.

He called the first group hygiene factors. Like how washing your hands keeps illness away without turning you into an athlete, fixing these everyday annoyances can prevent frustration, but it won't necessarily spark enthusiasm on its own.

New leads often fix every minor complaint and then wonder why enthusiasm stays flat. Resolving complaints mostly brings a team back to a neutral baseline; moving past that usually takes meaningful ownership and genuine appreciation. In iGEM, hygiene factors might look like lab access, material orders, organized records, and smooth syncs. It's worth sorting these out early, just don't expect a tidy setup alone to ignite passion.

Worth keeping in mind: when people look back on earlier projects, they tend to credit setbacks to outside factors and successes to themselves. Treat this model as a useful lens rather than a hard rule.

2. Not everyone shares your exact motivation (Reiss)

Ask four teammates why they joined, and you might hear four very different answers: some are there for hands-on bench work, some for the social side and team trips, some to build their CV, and some because they want to create a meaningful impact. All of these are valid reasons. A project lead who quietly assumes only one of them really counts risks alienating teammates without realizing it.

Steven Reiss called this tendency self-hugging: assuming your own drivers are the "normal" ones and seeing other people's as somehow less legitimate. It can lead you to offer the rewards that would motivate you, rather than the ones that actually resonate with your teammates.

The fix is simple: in your first week together, ask everyone, "What made you sign up?" Keep track of the answers, and come back to them when you assign roles or give shout-outs. Highlighting someone's work during a presentation, handing a curious teammate a tricky puzzle, or organizing a potluck night all take about the same effort, but landing on the right one for the right person makes a real difference.

Worth keeping in mind: Reiss's full model covers sixteen basic needs (including things like physical activity and food) that aren't all that relevant to project work. The useful takeaway here is mainly to watch out for self-hugging.



> **Go deeper:** *Herzberg, F. (1968). One more time: How do you motivate employees? Harvard Business Review, 46(1), 53–62. · Reiss, S. (2000). Who am I? The 16 basic desires that motivate our actions and define our personalities. Tarcher/Putnam.*

Goals and Limits

How far do you want to go?

Before we start a project, we should reflect on what our personal aims are, and what boundaries we're setting with the work we're about to take on. This helps us be more precise in our decision-making, and more mindful of our own limits. This is especially important to have clarity on long-term projects and team commitments, both for ourselves and for our teammates. It makes it easier for everyone to look out for each other and to manage each other's expectations.

Be as concrete as possible when answering these questions. You don't have to answer every single one, as long as you end up with a clear picture.



GOALS

1. What is there to gain from this project? *(For yourself, for the team, for the project, for the world.)*
2. What do you want to learn during this project? *(Hard skills, soft skills, concrete competences.)*
3. In which ways do you want to grow as a person?
4. What's your minimum goal by the end of the project? What's the baseline that needs to happen for you to feel content with having participated?
5. What's your maximum goal by the end of the project? What would send you over the moon if you achieved it?

LIMITS

1. How many hours a week are you willing to commit? Under what circumstances would that number change?
2. What would have to happen for you to leave the project? How likely are these scenarios?
3. At what point, and how, would you want to communicate it if one of these scenarios happens? How would you hope the team would react?

Once you've answered these questions, it's worth revisiting them every once in a while. Has anything changed? Did any unforeseen circumstances come up? How has starting the project changed your perspective on things?

It's okay for your answers to change over time. Being clear about these points gives you the ability to act before conflict or unmet expectations build up in the team. Trusting that everyone knows what they're working toward, and that everyone is keeping an eye on what might make them pull out, creates a real sense of safety when working on a project together. To go deeper there you can make this reflection one of the first team tasks and share your findings.

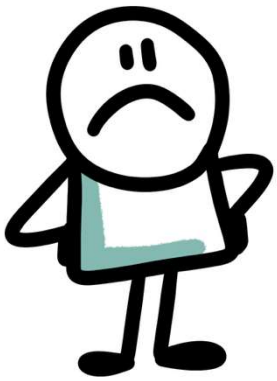
Especially when talking about your limits, it's important that a baseline of trust has already been established in the group. If you feel like your team isn't ready to share these kinds of insights with each other yet, take a look at our chapter on psychological safety first.

> **Go deeper:** Once you've found your individual goals, SMART Goals can help turn them into something concrete and trackable. Your weekly hours answer here also ties directly into the Declared Load Limit chapter.

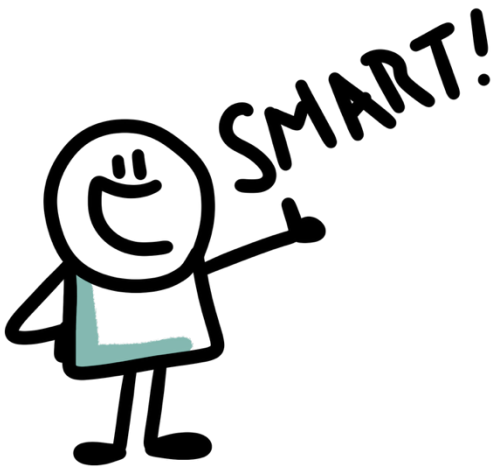
How to set SMART Goals

Does the way we formulate our goals influence the likelihood of achieving them? Yes! One way to improve the probability of success is to use SMART-Goals (Bjerke & Renger, 2016). That stands for **S**pecific **M**easurable **A**chievable **R**easonable **T**ime-bound. What does this mean?

I want to be more helpful to the team.
(not smart)



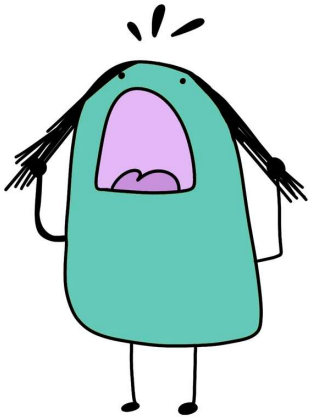
Every week for the next month I want to take one task off of somebody's hands.
(smart)



If applied consistently, clear, measurable and verifiable objectives become apparent. They can be differentiated into long-term goals (strategic) and medium- or short-term goals (operative). As a team you can review regularly and prioritize different aims, depending on your situation. By using SMART goals it is easier to make a decision which goals fit the current resources. Apply them both to your personal to-do list and your team projects and you will experience a different type of confidence when handling these to-dos.

Hulk Mode

How am I when I'm stressed



Every team hits a rough patch once in a while. People get overworked, deadlines close in, and experiments stop working the way they were supposed to. It's okay to be stressed out! Still, it helps to be aware of it yourself, and to help others recognize it too, when you've entered "Hulk mode."

Different people react differently to stress. Some close off and keep to themselves, while others find comfort in company. Some cope with humor; for others, an ill-timed joke is enough to light the fuse. To avoid unnecessary conflict in the group, it can help to make transparent how each of you behaves, and what you need, when you're under pressure. (If you're interested in learning how to better cope with the stress itself, see the Stress Responses chapter.)

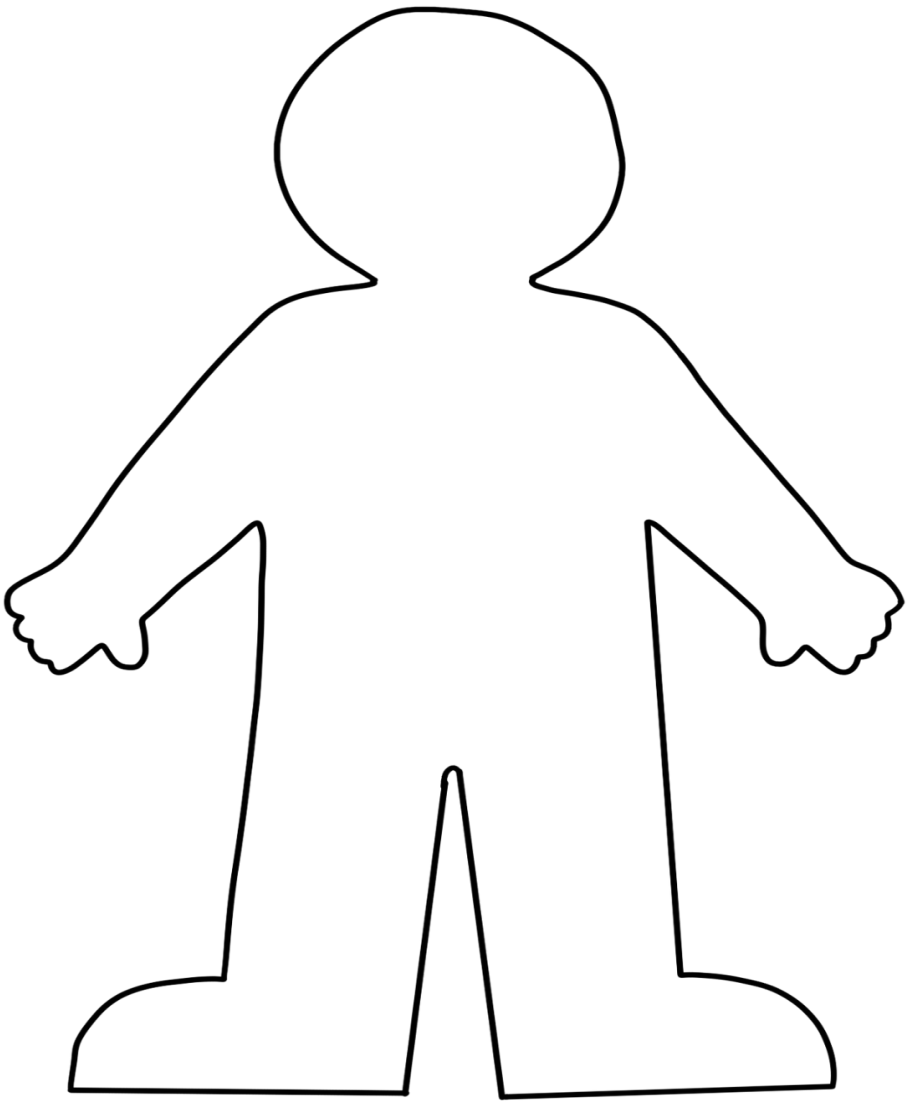
	Normal mode	Hulk mode
How do I behave?		
What do I need to work with you?		
How you can reach me best		

My best self

You've spent this part of the booklet getting to know your values, your needs, your strengths, what motivates you, and your goals and limits. **Now it's time to bring it all together**. Combine everything you've learned about yourself and draw a picture of it. It doesn't matter how well you can draw: just get your vision onto paper. Use words, colors, a collage, or anything else you need to make it come through.

There's no right way to do this. Some people draw a figure surrounded by the things that matter to them; others make a mind map, a mood board, or something more abstract. What matters is that when you look at it afterward, it feels like you.

Keep it somewhere you'll see it again, your desk, in the lab, or next to the coffee machine. Looking back at it later in the project can be a good reminder of who you wanted to be when you started.



People Profiles

People profiles help you gain a first insight into who is on your team. They can help to skip small talk and find alignment, maybe even become friends! Have every team member fill out the sheet and keep them somewhere anyone can look at any time. Hang them in the lab or keep a subpage for them in your notion. You'd be surprised what kind of conversations can be kicked off by simply asking "Can you elaborate what you meant with 'competitive baking'?"

Here are some example questions you can use

[PICTURE] [BIRTHDAY]

What is your occupation?

What were the most important milestones in your life up until now?

How would you describe your personality?

What are your strengths/ special experiences? How can those contribute to our project?

	… when I am not stressed.	**… when I am stressed.**
How do I behave…		
What do I need to work with you…		
How you can reach me best…		

What do you want to achieve or learn through this project?

What is the weekly commitment in hours you are willing to give? Under which circumstances does that number vary?

Which interests or hobbies do you have?

Anything else you'd like to share? Any Fun Facts?

A sticker that describes you:

This is me

My birthday

4 words that describe myself...

My name...

If I had a magic wand...

My favorite...

This makes me happy...

My favorite word

I'm taking this to a deserted island...

PART 2

Interpersonal

Why it's never just about you

You give someone what you think is a simple, honest answer, and they go quiet for the rest of the meeting. A teammate snaps at you over something small, and you spend the rest of the day replaying it, wondering what you did wrong. You walk away from both thinking "I don't get it, I didn't even say anything bad."

And you probably didn't. Understanding yourself is only half the story, the other half is realizing that everyone around you is running on their own needs, boundaries, and history, most of which you can't see. The same sentence can land completely differently depending on who hears it, what kind of day they're having, or what they actually needed from the conversation.

This doesn't mean everyone has to become a mind reader. It means noticing the signals people give you, asking instead of assuming, and giving others the benefit of the doubt you'd want for yourself. A lot of conflict doesn't come from bad intentions; it comes from two people who never quite understood what the other one needed.

This part is about reading what's underneath the surface, listening in a way that actually lands, and talking to each other without it turning into a fight.

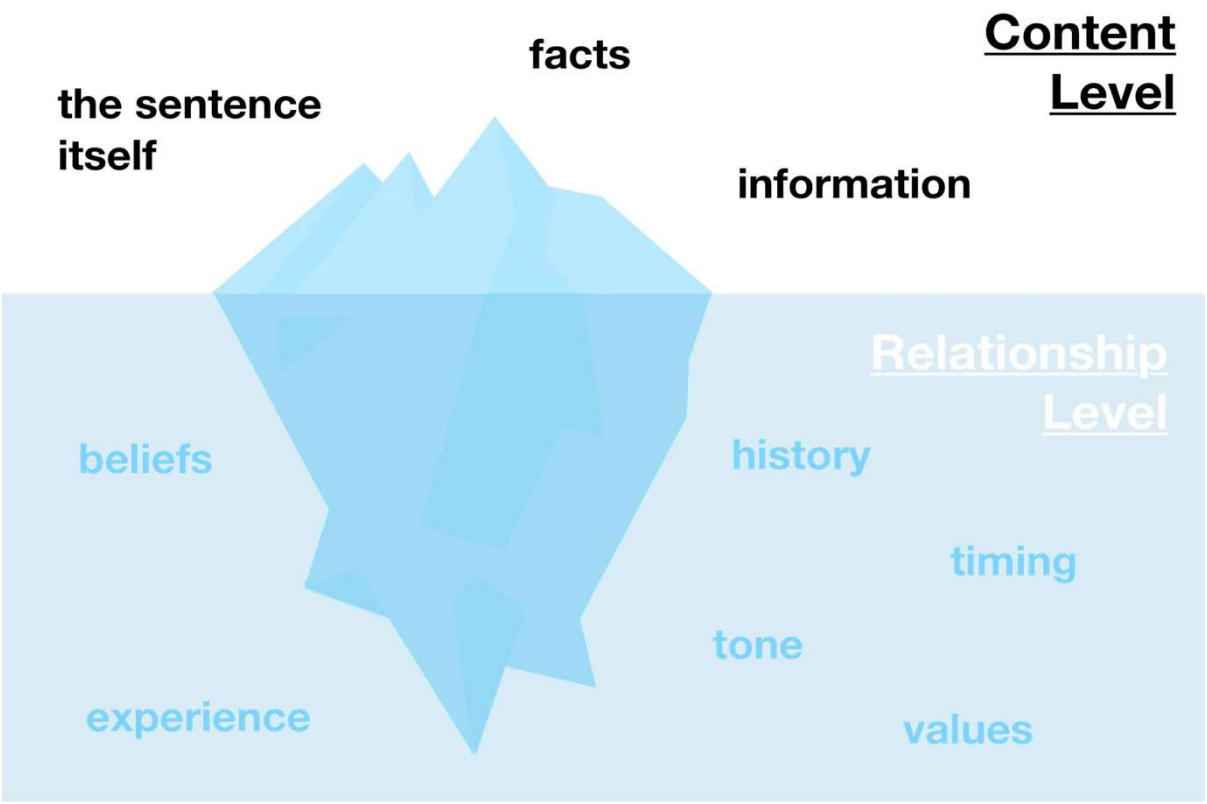
The Iceberg Model

“We need to hit that deadline.”

Said one way, that’s just information. Said another way, it can sound like an accusation, even though the words are exactly the same.

That’s because every message we send travels on two levels at once, and we usually only notice one of them. There’s the content level, the facts, the actual sentence that was said. This is the tip of the iceberg, the part above the water. And there’s the relationship level, everything underneath it: tone, timing, shared history, and what we assume the other person thinks of us. This is the much larger mass sitting beneath the surface, mostly out of sight, even to ourselves sometimes.

Every one of us carries around a version of this hidden mass. A sentence that feels completely neutral to you might land very differently for someone who’s had a rough week, who’s been burned by a similar comment before, or who’s simply built different expectations about how a question like that is usually meant. None of that is visible in the moment. We only ever see the tip.



The two levels aren't separate from each other, either. The relationship level shapes how the content level gets received, almost like a frame around a picture. This is why a defence like "but I only asked when it would be finished" can be completely true and still miss the point entirely. The other person isn't reacting to your words; they're reacting to everything beneath them.

This gives us a simple rule we can use right away: If a conversation keeps circling without really resolving, it's rarely about the facts anymore. Disagreements about facts tend to clear up once new information comes in. If new information doesn't change anything, the real tension is probably sitting below the waterline, and both people are spending their energy on the wrong layer, without knowing it.

To break that loop, it can help to step back and name the dynamic instead of the topic. Something like "I feel like we've been going in circles for ten minutes, and I don't think this is really about the protocol anymore. What's actually going on?" already shifts the conversation to where the real tension is.

> **TRY THIS**
>
> Before bringing up something sensitive, it can help to say what you intend before the tension has a chance to rise, rather than after. "I'm not trying to point fingers here, I just want to understand where we stand" is one sentence that can already take a lot of the defensiveness out of a conversation, simply because it tells the other person what's happening beneath your own waterline.

> **Go deeper:** *Watzlawick, P., Beavin, J., & Jackson, D. (1967). Pragmatics of Human Communication. W. W. Norton & Company. The distinction between the content and relationship levels is one of their core axioms of human communication.*

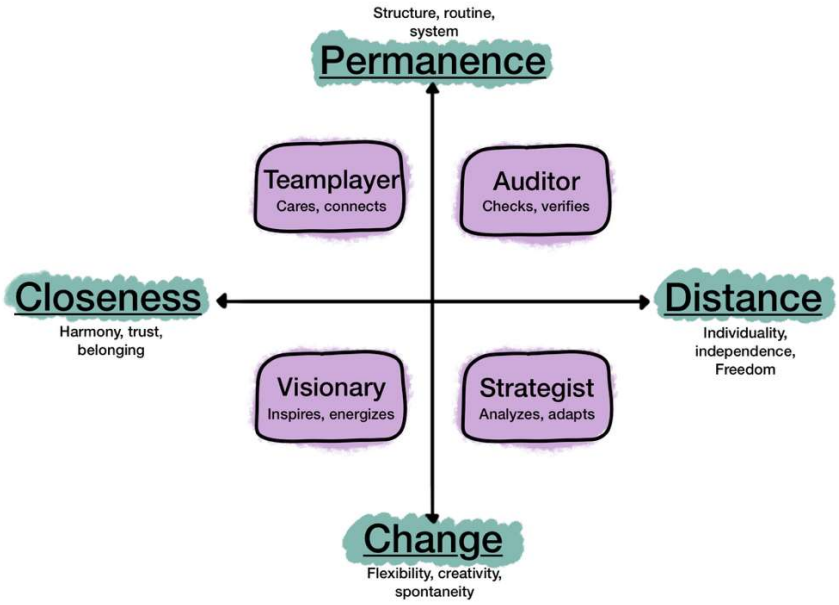
The Riemann Thomann model

Why everyone needs something different

Some people work best with someone else in the room. Others need a closed door. Some thrive when the plan holds steady, while others go flat if nothing has changed for three weeks.

Riemann suggested that these aren't just casual preferences but fundamental needs, and that each of us carries four of them at once. He arranged them along two axes that pull against each other. One is closeness versus distance, how much contact you need compared to how much room you need. The other is permanence versus change, how much you need things to hold still compared to how much you need them to move.

Riemann originally described these as four basic forms of anxiety: fear of closeness, fear of being alone, fear of change, and fear of things staying the same. Thomann later reframed those fears as needs instead (more on that in the Needs chapter). That single shift turned a clinical theory about individuals into something a lot more practical for teams.



We all carry all four needs in us. Usually one or two dominate, though the balance can shift depending on the context. You might crave distance at your desk but seek closeness in a team meeting an hour later. There's no ideal spot on this map. There's only where you happen to sit, alongside the fact that someone else on your team might be sitting somewhere else entirely, and that's not a problem to solve.

Here's roughly how each need tends to show up, both when it's met and when it's running low:

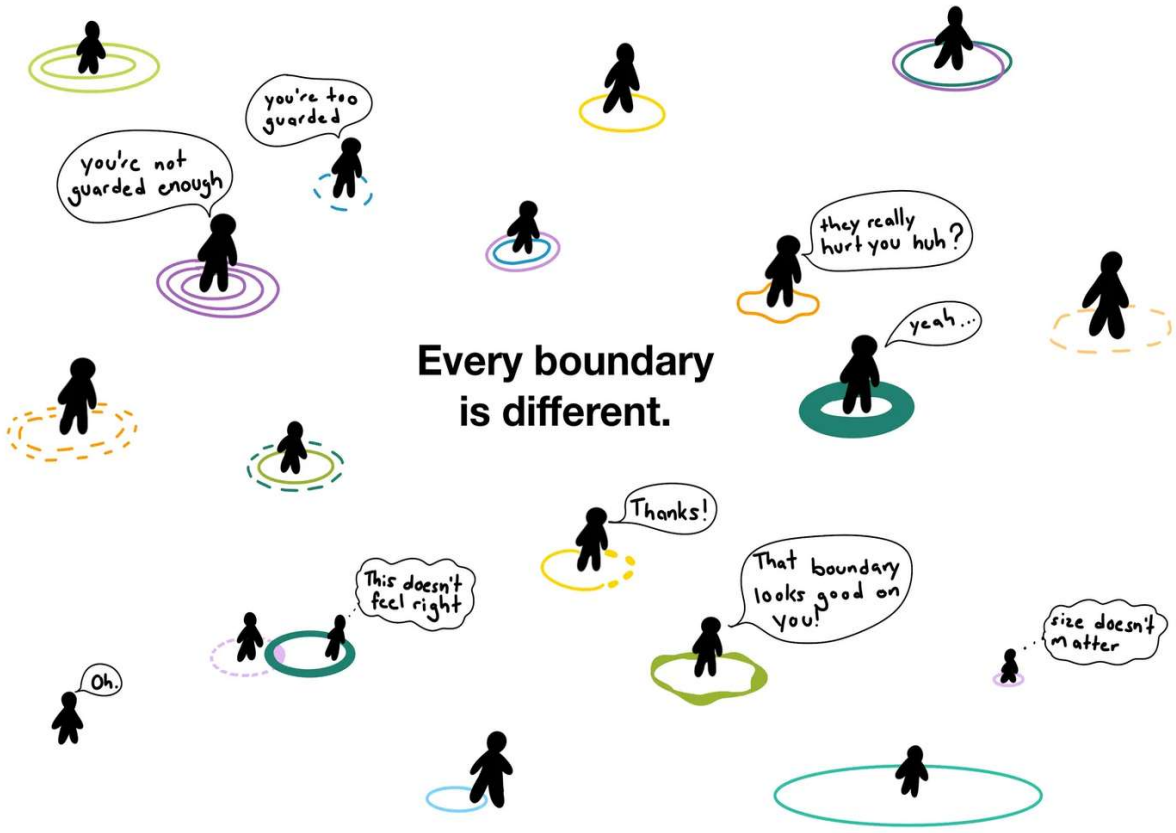
Need	When it's met	When it's running low
Closeness	Warmth, belonging, working alongside others	Avoids conflict to protect harmony, reads distance as personal rejection
Distance	Autonomy, objectivity, room to withdraw	Turns cool and guarded, leans on self-reliance long after it stops helping
Permanence	Structure, reliability, clear agreements	Overengineers plans, grows anxious when decisions stay open-ended
Change	Novelty, spontaneity, room to maneuver	Feels suffocated by routine, avoids long-term commitments

What makes this model genuinely useful is what happens when two people's needs collide. Someone who needs closeness pushes for more contact, which prompts a colleague who needs distance to pull back. That withdrawal can feel like rejection, which makes the first person reach out even more, which pushes the other person further away. Neither of them is doing anything wrong on purpose, but the dynamic still spirals downhill, step by step.

This is exactly why the model earns its place here. Once a team can name this loop while it's happening, the blame shifts away from "that person is difficult" and onto the pattern itself, something you can actually interrupt and adjust together, instead of a personality you have to work around.

> **Go deeper:** *Riemann, F. (1961). Grundformen der Angst. Ernst Reinhardt Verlag. The original clinical source, centered on core anxieties rather than team needs.* · *Thomann, C., & Schulz von Thun, F. (1988). Klärungshilfe. Rowohlt.*

Contact Boundaries



Picture a circle around you that separates you from everything outside. It works a bit like an invisible filter, deciding what gets through: feedback, criticism, unspoken expectations, or simply someone else's bad mood.

Because everyone's filter is calibrated a little differently, the exact same sentence might slip past one person unnoticed, yet land like an attack for someone else. Neither reaction is wrong. They just reflect how permeable that particular boundary happens to be.

Family therapy describes three broad ways this boundary can be shaped. A rigid boundary lets almost nothing through, so even well-meant feedback tends to bounce right off. A collapsed boundary lets everything in, which can leave you feeling crushed under obligations nobody actually asked you to carry. A flexible boundary can do both: opening up to let in a new perspective, or closing firmly when you need to hold your ground. This last one is usually the one we're aiming for.

We also tend to fall into fairly predictable habits when it comes to managing this line day to day. Gestalt therapy describes six such habits, and most people recognize two or three of them in themselves right away.

- **Going along with it:** agreeing out loud while disagreeing in your head.
- **Following an unwritten rule:** believing you have to be reachable at all times, even though nobody ever actually said so.
- **Assuming you already know:** deciding what someone thinks of your work without asking them.
- **Turning it inward:** letting anger become self-criticism and an objection become silence.
- **Deflecting:** cracking a joke or changing the subject the moment things get serious.
- **Over-monitoring yourself:** rehearsing a thought so many times in your head that it never actually leaves your mouth.

It's worth keeping in mind that none of these habits are flaws. Each one protected you at some point in your life and simply kept running on autopilot ever since.

Boundaries also shift depending on the room you're in. When people worry that an honest question or an honest mistake might be held against them later, defensive walls tend to go up across an entire team at once. A quiet team is rarely just a group of naturally quiet people; more often, it's a group reacting to something in its environment.

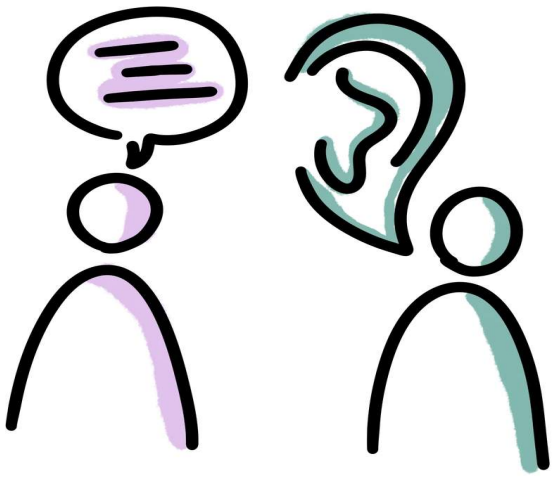
> **Go deeper:** *Minuchin, S. (1974). Families and Family Therapy. Harvard University Press. The source for rigid, collapsed, and flexible boundaries. · Perls, F., Hefferline, R., & Goodman, P. (1951). Gestalt Therapy: Excitement and Growth in the Human Personality. Julian Press.*

Active Listening

You explain something to a colleague. They nod. They say “hmm.” They look right at you. Later, you follow up and realize that nothing actually registered.

Listening and not listening look almost identical from the outside, which is probably why we rarely catch the exact moment attention drifts away. What rushes into that gap is assumption. You assume they understood, and they assume they know what you meant. A surprising amount of conflict starts exactly here, not from genuine disagreement, but from two people who simply never checked with each other.

There are a few things that tend to help:



Pay attention. Turn directly toward the person. Keep eye contact, give small acknowledgments, close the laptop that’s open in front of you. It costs almost nothing, but everyone notices right away when it’s missing.

Say back what was said. Reflect the point in your own words, something like, “So the issue isn’t really the protocol itself, but that nobody told you the deadline had moved?” Then let the other person correct you. You’ll misunderstand things more often than you’d expect, and that’s okay. Being corrected isn’t a sign the process failed, it’s actually the point of it.

Say back what was left unsaid. Offer your observations gently rather than as a verdict, for example “It sounds like this has been frustrating for a while.” Then follow up with the question that gets asked far less often than it should: “What do you need from me?”

A common trap is mixing up understanding with agreement. You can reconstruct someone’s argument with complete accuracy and still disagree with it. A lot of people avoid summarizing because it feels like it might signal agreement, so they jump straight to their counterargument instead. The other person usually ends up feeling unheard, and digs in even deeper.

This habit of reflecting back actually helps in two separate ways. First, it gets in the way of mentally rehearsing your reply. It’s genuinely hard to summarize someone’s position accurately while you’re also drafting your rebuttal in your head, so paraphrasing quietly forces you to actually pay attention. Second, it separates being heard from being agreed

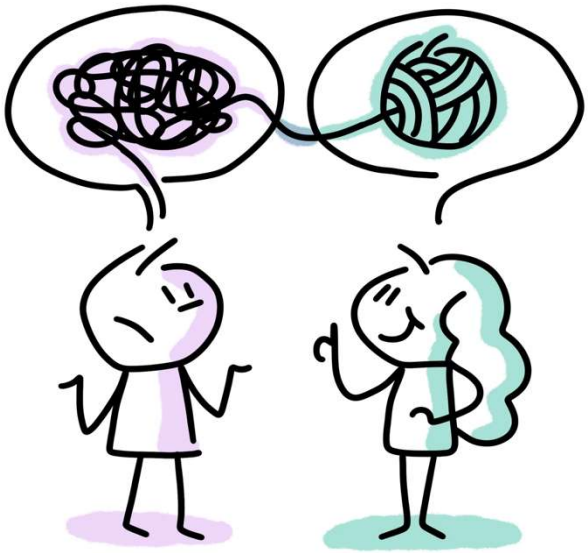
with, and that distinction matters more than it seems. A surprising amount of team friction isn't really about the final decision; it's about feeling run over somewhere along the way there.

TRY THIS

Next time you're in a discussion, try summarizing what the other person said before you give your own answer.

Go deeper: *Rogers, C., & Farson, R. (1957). Active Listening. Industrial Relations Center, University of Chicago.*

Nonviolent Communication



Most of what gets said in a conflict isn't really what the person means. Behind a sentence that lands like an attack, there's usually an underlying need, just expressed in a shape nobody can actually work with. Someone wants to be able to trust the shared document, but what comes out of their mouth is "You never update it."

A lot of conflict isn't really two people wanting opposite things. More often, it's two people who haven't yet managed to say what they need in a way the other person can act on. Nonviolent Communication (NVC), sometimes known by its German name GFK, offers one way to get there, built around four simple steps:

Observation: Describe only what a camera would have recorded. "You never update the document" is already a verdict, and that word "never" is almost always a bit of an exaggeration, which is usually exactly why conversations slide into arguing over edge cases instead. "The document wasn't updated after our last two meetings" is closer to a neutral observation. Of the four steps, this is often the one people find hardest to actually stick to.

Feeling: Name the emotional effect this had on you. Watch out for disguised judgments here: feeling ignored, let down, or manipulated aren't really feelings in this sense, they're interpretations of someone else's behavior with an emotional label on top, and they don't give the other person much to respond to constructively. Something like frustration, worry, exhaustion, or relief is closer to a genuine feeling.

Need: Name the underlying human need that currently isn't being met. Needs tend to be fairly abstract and universal, things like reliability, clarity, recognition, or rest. They don't point at a specific person, action, or strategy. This is the step that turns an accusation into something closer to neutral information.

Request: Ask for something concrete and doable that the other person can genuinely say no to. That last part is really the test of it. If saying no would come with some unspoken cost, what you've made is a demand dressed up politely, and most people can feel the difference right away.

The idea behind all this is fairly simple. A verdict asks someone to agree with a judgment, which tends to push them toward either giving in or pushing back, usually the latter. An observation paired with a need gives the other person much less to defend against in the first place.

There's also a quieter half to this practice that's easy to overlook: running the same four steps on what the other person is saying.

4 STEPS

1. What did they observe?
2. What might they be feeling?
3. What need seems to be driving their reaction?
4. What concrete thing do they actually want?

Doing this translation silently in your head often does more to ease tension than preparing your own defence ever does.

In iGEM: nobody can really be told what to do through formal authority here. Everyone is giving their time voluntarily, and team leads are often close peers rather than managers. You might expect that to lower friction, but it can just as easily do the opposite. Without a formal hierarchy to absorb some of the everyday tension, that tension tends to land directly on personal relationships instead. A disagreement that looks like it's about which genetic construct to prioritize is often, underneath, about reliability, recognition, or everyone just being exhausted, and it tends to surface at the first opening that feels technically legitimate. This is part of why building NVC into your team's ground rules can genuinely help.

Go deeper: *Rosenberg, M. (2003). Nonviolent Communication: A Language of Life (2nd ed.). PuddleDancer Press. · The Center for Nonviolent Communication: cnvc.org*

A WORD OF CAUTION

Delivered mechanically, NVC can sound like an unnatural script; Delivered while you're still boiling with anger, it can come across as condescending rather than genuine. The fix usually isn't better phrasing, but stepping away until you're calm enough to actually mean what you're saying.

It can also be misused: pointing out how a colleague "should" be communicating while they're visibly upset can be its own quiet assertion of power, dressed up as helpfulness.

Following a structured script doesn't erase existing power dynamics on its own. A conversation between an experienced project lead and someone brand new to the team isn't automatically on equal footing just because both people are using the same four steps.

Very good meetings

Do you find your meetings more frustrating than helpful? Try implementing our guide for better meetings:

1. **Define start + end time and stick to them**

   For each meeting it should be clear when it starts and when it ends. Especially for recurring meetings, it is important to stick to the end time in order to respect everyone's time. The facilitator or a designated time keeper has an eye on the duration of each item and the whole session. If the time is up and there are still unfinished agenda points, agree on a follow up meeting. Consistency in handling this gives a peace of mind to all attendees.

2. **Have a facilitator**

   A facilitator has the right to give the floor to someone, deescalate conversations that do not serve the purpose of the meeting or cut short discussions that start to go overboard. Think of the facilitator as the tour guide of a meeting. They are responsible for the well being of the group and guide them to their destination. You have to be aware that sometimes the facilitation role interferes with what you would contribute to the conversation as a normal participant. Who commits to facilitate should be the facilitator first and only if necessary transparently bring up their personal opinion. This is why the facilitation role is best shared and alternated between team members.

3. **Keep minutes**

   Not everyone can take part in every meeting, but the information is important nevertheless. Designate a person in the beginning of each meeting to log everything important. See our guide on documentation.

4. **Commit to cancel**

   No one likes showing up and realizing that no one else came. Define for each meeting who is expected to attend and commit to cancelling, if you don't plan on showing up. This might seem self-explanatory, but it has to be agreed upon as a group for this to work.

5. **Be transparent about the purpose of the meeting**

   Everyone who participates should have clarity what this meeting is for. Is it to solve a specific problem? Keeping each other updated? Opening a community space? Only if all share the same expectation of the outcome, can the meeting be productive.

6. **Have an agenda**

   An agenda goes into more detail than the purpose. Which concrete topics or items have to be discussed? How much time do we want to give each? This ensures that the facilitator does not fly blindly into the meeting, helps everyone to understand what happens when, and also manages everyone's expectations. It also helps to have the last agenda point be "Anything else" to give space to thoughts that came up during or shortly before the meeting. This is also where you can bring up tensions (see tension based work).

   Pro tip: Start each meeting with a check-in question. This warms everyone up, allows the group to settle and gives a sense of welcoming each other. The question could be as simple as "How's your energy today?" or "What's your favorite ice cream flavor?".

7. **If not our guide - set your own rules**

   Last but not least: The most important rule is that you discuss and agree upon your specific set of meeting rules. Whether you ignore our proposal completely or use it word for word - every member has to be calibrated on the same expectations in order to be the least frustrating for all.

Checklist for tough conversations



1. Make an appointment
2. Calm, undisturbed environment, neutral grounds
3. Third neutral party if necessary
4. Collected your thoughts, notes if necessary
5. Private conversation
6. The other party is informed of the topic
7. Established ground rules for communication
8. Exits are available for both parties

De-escalating Conflicts

Not every conflict needs a full mediation process. But when a disagreement has gotten tense enough that a normal conversation isn't quite landing anymore, it can help to have a few concrete steps to fall back on. Here's one structure that works well for two people trying to find their way back to each other, it has proven to be very useful to us:

1. Acknowledge that there's a conflict

Before a conflict can be solved, both people need to actually recognize that it's there. This can be as simple as asking, "Do you agree that we have a conflict around this topic?" Once you've both agreed on that, you have a foundation to build on.

2. Join forces and commit to finding a solution

The next step is about aligning on working toward a solution together. Something like "Are you willing to work this out with me, each of us doing our part?" can open that door.

If the other person isn't ready to agree here, there may be some emotional interference in the way, maybe pride, anger, or frustration. In that case, it can help to give them a little space and invite them to come to you once they're ready, or to bring in a neutral third party instead.

3. Share perspectives

Now both people get the chance to share their perspective on the situation.

- The listener stays calm and doesn't interrupt.
- Once the first person is finished, the listener summarizes what they understood, without judgment, and asks questions if anything's unclear.
- This continues until the first person feels genuinely understood.
- Then the roles switch, and it starts again from the top.

If it helps people feel safer, it's worth agreeing on some ground rules beforehand, for example: no accusations, a calm and collected way of speaking, and no shame around emotional reactions.

This process doesn't solve the conflict by itself, but it does help de-escalate a tense situation. Sometimes that's already enough for both people to understand and accept each other, even without landing on a concrete solution.

PART 3

Teamwellbeing

Why we should concern ourselves with team performance

Your team started the project full of energy, everyone excited and ready to go. A few weeks in, meetings get quieter, fewer people volunteer for tasks, and the spark feels gone. Nobody did anything wrong, perse. It just feels different now, and you can't quite put your finger on why.

Teams aren't static. They move through phases, from the excitement of starting out to the friction of figuring out how to actually work together, and eventually (hopefully) to a point where things just click. The Drexler-Sibbet Team Performance Model describes this as a series of stages, each with its own question the team needs to answer before it can move on, things like "why are we here?" or "how will we work together?" (Drexler, A., & Sibbet, D., 2025). Knowing which stage your team is in can explain a lot about why things suddenly feel harder, or easier, than before.

A quick note before we continue: this part leans on the word "leadership" more than we'd like, and we know that word makes some people tune out. If you're not an Orga or Subgroup Lead, this chapter **is still for you**. Every single person in a team shapes how it performs, not just the people with a title. Leadership" is not a one way street, it's a relationship between different people. It differs from "hierarchy" or "authority" in that way, that it does not depend on a position someone holds, but on what someone does: stepping up when something needs doing, making space for others to contribute, or simply noticing when the team needs direction and offering it. Anyone can do that, at any point, regardless of their role. So whatever title you have (or don't have), read on: this is just as much about you as it is about whoever happens to run the next meeting.

The Golden Circle

Why are you doing things?

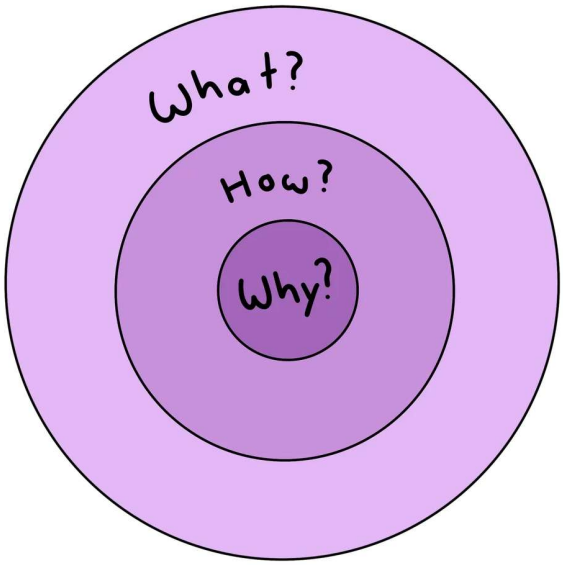
Most teams describe their project from the outside in. They start with what they're building, briefly touch on how, and often never get to why. Think of three circles, moving from the inside out:

Why: the team's core purpose. Winning a medal is a result, not a reason, a real purpose explains why the work matters in the first place.

How: the values, methods, or principles that guide the way you work together.

What: the visible product or deliverable.

Almost every team can describe their What. Fewer can explain their How. Almost none can put their Why into words, which is exactly why doing so as a team sets you apart.



This matters for two reasons. First, it filters who sticks around. A team that only talks about its What attracts people looking for a task on their schedule, while a shared Why attracts people who actually believe in the reason behind it, the ones still showing up once the daily tasks get repetitive. Second, it protects the team when things go wrong. If you define yourselves only by one construct, a failed lab run can feel like it ends the whole project. If you define yourselves by a shared purpose, that same failure is just one experiment that didn't pan out, and the team's reason to exist is still intact.

TRY THIS

Revisit your team's Why together, not just in week one, but again around the midpoint. By then, everyone's usually deep in the What and the original spark has faded, which is exactly when bringing the purpose back into focus helps most.

In iGEM: a brand-new university team has a Why that older teams often have to manufacture. You're building something that never existed on your campus before, and every future team will build on what you leave behind. That's worth naming explicitly as a team, most first-year teams never think to use it.

Go deeper: *Sinek, S. (2009). Start with Why. Portfolio.* The accompanying 2009 TEDx talk covers the core argument in eighteen minutes.

A WORD OF CAUTION

- Sinek also claims these three layers mirror brain anatomy, linking Why to the limbic system and What to the neocortex. That claim lacks empirical support, so it's best left out entirely, the communication principle holds up fine on its own.
- This is a practical pattern drawn from case studies, not a rigorously tested theory.
- Watch out for slogans dressed up as purpose: "we want to revolutionize medicine with synthetic biology" is really just a grand What wrapped in buzzwords. A genuine Why is concrete enough that it would actually rule out some projects, not just justify any of them.

Tuckman stages of team development

Picture a clock face. The team starts at twelve and moves through five phases, roughly one after another. Most teams move through them in order, though unexpected disruptions can push a team backward to an earlier phase.

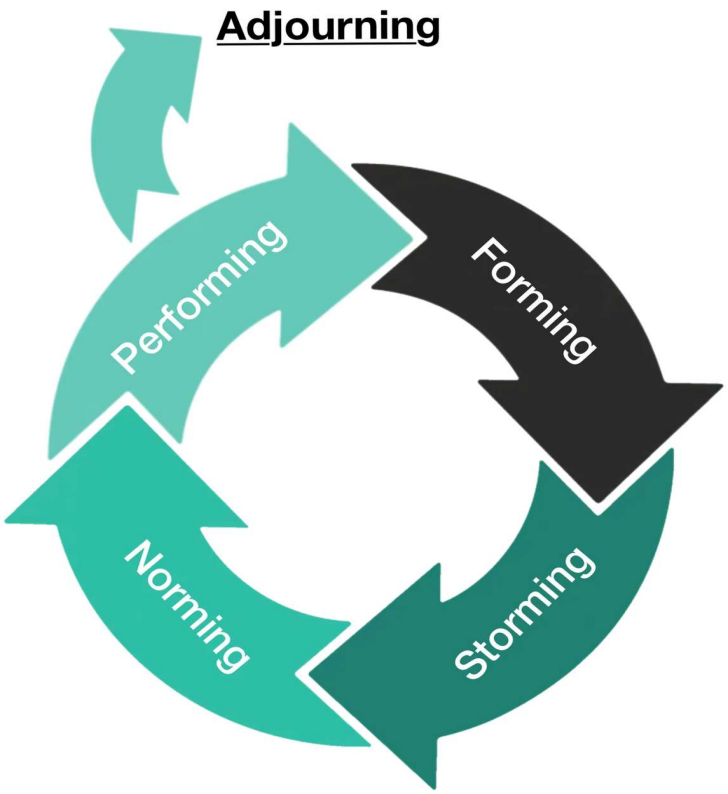
> **TEAM PHASES**
>
> **Forming:** polite and cautious. Expectations run high, roles stay vague, and everyone is on their best behavior.
>
> **Storming:** the honeymoon phase ends. Personal differences surface, responsibilities get contested, and motivation often hits its lowest point of the whole project.
>
> **Norming:** things settle. Shared habits take shape, roles solidify, and feedback gets easier to hear without feeling defensive about it.
>
> **Performing:** responsibilities are clear, and friction gets resolved instead of swept aside. Different people naturally take the lead depending on who's closest to the problem at hand.
>
> **Adjourning:** the work winds down. Wrapping up after an intense stretch of working together is often emotionally harder than people expect, and almost no team plans for it.

Storming is the phase most worth normalizing ahead of time. Friction isn't proof that a team was put together badly, it's the phase where a group actually negotiates how it's going to work. A team that avoids all tension usually never develops real working norms either.

There are two common ways teams get stuck in this phase instead of moving through it:

- Sweeping disagreements under the rug, which just means they resurface later, usually right when a deadline is looming.
- Settling into constant conflict, which keeps the group permanently stuck.

Teams can also slide backward into storming even after reaching a good rhythm. If a key member leaves, someone new joins, or the project's scope shifts, a team that was performing well can land right back in storming. That's a normal regression, and it's much easier to handle once everyone recognizes the friction for what it is.



TRY THIS

Give your team a heads-up about the storming phase in your first week together. A team that expects this dip tends to treat tension as something to navigate together. A team caught off guard is more likely to treat conflict as a personal failure, and starts looking for someone to blame.

Go deeper: *Tuckman, B. (1965). Developmental sequence in small groups. Psychological Bulletin, 63(6), 384–399. · Tuckman, B., & Jensen, M. (1977). Stages of small group development revisited. Group & Organization Studies, 2(4), 419–427.*

A useful alternative for fixed deadlines: *Gersick, C. (1988). Time and transition in work teams. Academy of Management Journal, 31(1), 9–41.*

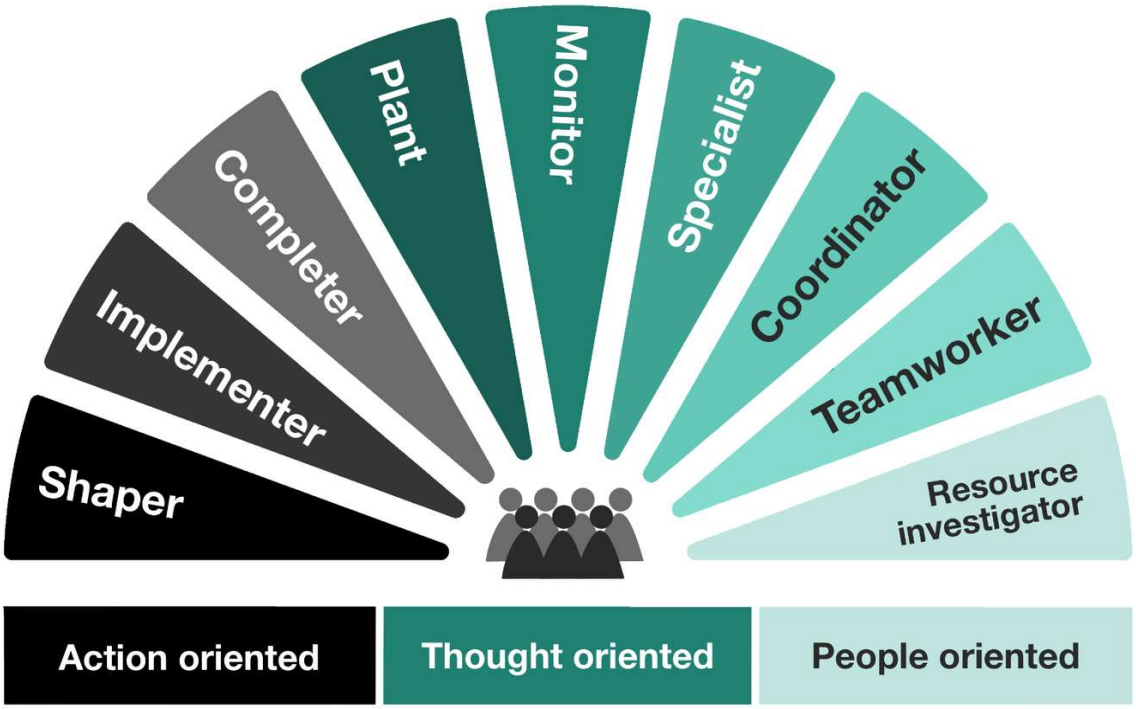
Belbin’s Team Roles

Put a group of highly intelligent people in a room and give them a project, and they’ll often lose to a team of fairly average people.

Researchers actually tested something close to this, and the group that kept losing earned a nickname: the Apollo Team. Everyone on it spent their time arguing, picking apart each other’s logic, and trying to prove how clever they were. In the end, nobody made a decision, and no real work got done.

A great team isn’t built on raw intelligence alone. It works because different people bring different working habits to the table.

Belbin identified **nine working roles**, grouped into three broad types. Most people naturally lean into two or three of them. Every role also comes with an “allowable weakness,” a built-in blind spot that tends to tag along with that particular strength. Good teams tend to accept these as the price of admission, rather than trying to train them away entirely.



	Role	What they bring to the table	Their built-in blind spot
Action oriented	**Shaper**	Pushes hard to get things moving, thrives under pressure	Can come across as bossy or blunt when stressed
	Implementer	Turns messy ideas into realistic, step-by-step plans	Dislikes sudden changes once a plan is set
	Completer Finisher	Catches small mistakes, makes sure work actually crosses the finish line	Anxious perfectionist, hates handing work off to others
Thought oriented	**Plant**	Highly creative, finds clever solutions to tricky problems	Forgets real-world limits, struggles to explain ideas clearly
	Monitor Evaluator	Stays logical, weighs pros and cons without getting swept up emotionally	Can come across as overly critical or cold
	Specialist	Brings deep expert knowledge, enjoys working alone on hard topics	Can get lost in technical detail and miss the big picture
People oriented	**Coordinator**	Keeps everyone focused on the goal, brings out people's strengths	Can look like they're offloading their own work onto others
	Teamworker	Calms people down, smooths over conflict, keeps morale up	Struggles to make tough calls when someone might get upset
	Resource Investigator	Networks outside the group, finds useful contacts and opportunities	Loses steam once the initial excitement wears off

You don’t need nine people to make this work, one person can easily carry two or three of these roles at once.

The model helps in two ways:

- **It shows what a team is missing.** We tend to build teams around technical skills and forget about working habits, which is how you end up with a lab full of brilliant people who still can’t finish a single slide deck.
- **It takes the personal sting out of disagreements.** When one teammate wants to brainstorm five more ideas and another wants to lock the schedule down, neither of them is being difficult. That’s just a Plant and an Implementer doing exactly what they’re good at. Once you can name the clash, it stops feeling like a fight and starts looking more like a puzzle to solve together.

> **TRY THIS**
> Next time you’re in a discussion, try summarizing what the other person said before you give your own answer.

In iGEM: the competition naturally pulls in Plants and Specialists, since coming up with a clever synthetic biology idea gets most of the attention. That tends to leave execution-focused roles in short supply.

The last month before the wiki freeze really belongs to the Completer Finisher. Find out early in the season who that person is and give them real say over deadlines and details. In June, their nagging about file formats and documentation might feel annoying, but they’re not trying to slow you down, they’re just ahead of everyone else.

> **Go deeper:** *Belbin, R. M. (1981). Management Teams: Why They Succeed or Fail. Heinemann. · Furnham, A., Steele, H., & Pendleton, D. (1993). A psychometric assessment of the Belbin Team-Role Self-Perception Inventory. Journal of Occupational and Organizational Psychology, 66(3), 245–257.*

A WORD OF CAUTION

- The multiple-choice test isn't a foolproof personality quiz. It's meant to describe how you tend to act on a team right now, not lock you into a fixed box forever. Your role can shift quite a bit depending on who else is in the room.
- Leave people's blind spots alone where you can. Force an imaginative Plant to become neat and organized, and you won't get a great planner out of it, you'll get a mediocre Implementer and lose your best problem-solver in the process.

"Belbin" and the role names are the trademark of Belbin Associates; see belbin.com for the official assessment (Belbin 1981) & belbin.com).

Our favourite energizers

The sun shines for everyone

(10 - ∞ mins, as many persons as you like)

1. If you play with n players, set up a circle of (n-1) chairs. All but one person are seated.
2. That person stands in the middle and starts: “The sun shines for everyone that… has more than one sibling!”
3. Anyone who fits the called for characteristic has to get up and find another chair to sit in. The person in the middle has to try to find a seat also. The only rule: No one is allowed to take back the seat they sat in last.
4. One person is without a seat and finds themselves in the middle again. The next round begins, another characteristic is called out: “The sun shines for everyone that… ”
5. This game is great for new teams to get to know each other. You can make it a rule not to use visible characteristics like hair color or whether someone wears glasses. It can also be allowed to just say: “The sun shines for everyone!”, then everybody has to get up and find a new seat.

The yeast we can do

(30-90mins, 2-6 persons per game)

This game holds a special place in our hearts :D The KIT iGEM team 2026 that created this TeamKIT also invented a board game called “*The yeast we can do*”. Head on over to our wiki to download the game and print it out, as often as you need.

While playing you will complete synbio-missions, learn about encapsulins and what we could need them for. Beware of earthquakes, hungry yeast colonies superseding your stance and other challenges that might keep you from accomplishing your missions. This game is also fun to play with non-biologists, no prior knowledge needed!

4 Phase Taboo

(45 - 90mins, as many persons as you like)

1. Firstly, everyone who plays writes down two or three words and throws them into a bowl. Nouns, verbs, anything is allowed.
2. The group is split into two even teams. There are four rounds per game. In the first round, a drawn word is explained. One team starts, one of the members starts explaining one of the paper slips. Once another team member guesses the word correctly, the explaining person draws the next word. Each person gets a minute to explain as many words as they can. After the minute is up, the first person of the other team has to explain to their team, also for a minute. The teams alternate explaining until all the words have been explained. Each team counts the correctly guessed words, the points are noted down.
3. All the words are put back in the bowl. The second round is exactly the same, only that you may only use one word now to help your team mates guess correctly (of course they may not say the word on the paper). Again, each member has a minute to get through as many words as possible, taking turns between the teams. This goes on for a third round, where you mime the word and a fourth round, where you may only use a sound. Each round ends when all the words have been guessed, then they are being put back for the next round.
4. After the last round all points are counted and the team with the most points wins.
5. If a word is not guessed while the time runs out, it may not be revealed to the team and gets put back into the bowl for the next team. Before the game starts you can agree on everyone only choosing words from a certain topic, a group of people etc.



Self-Determination Theory

Imagine someone on your team is still delivering their work on time, but has quietly stopped talking in meetings. You try to pin down when it started, but you can't quite put your finger on it.



You won't fix this by just telling them to care more. Motivation isn't something you can hand someone. It grows when three core needs are met, and it fades when even one of them is ignored.

Competence: feeling capable. People need work they can actually do, and they need to see what happened to the effort they put in. This tends to break down in one of two ways, either the task is unreasonably hard, or nobody ever shows them what became of the work they finished.

Relatedness: feeling connected. Most people need to feel like they belong and matter to the group, and when that's missing, it's rarely because of outright hostility. More often, it's just bad organization. If a subteam has no real reason to talk to anyone else for six weeks, they quietly stop feeling like part of the project.

Autonomy: feeling in control of your own work. This doesn't mean working entirely alone or having no rules at all. You can follow someone else's plan and still feel autonomous, as long as you understand the reasoning behind it and actually agree with it. The opposite of autonomy isn't having direction, it's feeling controlled. The exact same instruction can motivate someone or drain them completely, depending on whether you explained the why behind it.

Instead of asking how to make someone work harder, it helps to ask which of these three needs might be running low. Reassigning tasks won't fix a belonging problem, and cheering someone on won't fix a control problem.

Think of it as three pillars holding up a roof labeled "motivation." If one pillar gives way, the roof comes down, the other two can't carry the weight on their own.

TRY THIS

Once a month, check in with a team member to see which need feels a bit empty.

- If they feel incompetent, try pairing them with someone for a couple of weeks and give them clear feedback on something they just finished.
- If they feel isolated, try having their subteam work directly with another group, rather than pulling them aside for an awkward one-on-one.
- If they feel controlled, try handing them full ownership of one complete task instead of scattered pieces of three different ones.

In iGEM: nobody gets paid here, nobody can be fired, and nobody technically has to show up on a weekend. These three needs are really the main tools you have for keeping people engaged.

Go deeper: *Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. Journal of Personality and Social Psychology, 18(1), 105–115. · Deci, E. L., & Ryan, R. M. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. Guilford Press. · selfdeterminationtheory.org* offers free articles and tools.

A WORD OF CAUTION

Rewards tend to hurt motivation mainly when they're expected in advance and tied directly to a task people already enjoy for its own sake (*Deci, Koestner, & Ryan, 1999*). Unexpected praise and genuine appreciation almost always help, so don't stop praising people

The Leadership Fan

There's no single best way to lead. The real skill is choosing the right approach for the moment in front of you, rather than falling back on whatever feels most natural.

This model, developed as a teaching tool by the House of Competence, groups eight leadership habits into two broad sides, one leaning more on structure, the other more on people.

Structure-driven	People-driven
Normative: Setting clear rules, boundaries, and quality standards.	**Participative:** Asking for input and involving people in decisions.
Directive: Defining exactly what needs to be done and keeping work focused.	**Integrative:** Helping people get along, pairing mentors, settling disputes.
Delegating: Handing over a project and trusting someone else to run it.	**Coaching:** Helping people grow by asking questions instead of giving them the answer.
	Inspiring: Building excitement around the big picture and team identity.

Neither side is better than the other. Think of a folding fan: a fan with only one blade doesn't work. Being an effective leader means being able to open whichever blade the moment actually calls for.

New leaders often don't really choose how they lead. They tend to copy a past boss, or just default to their own personality, using the same style regardless of the situation. Two mistakes show up again and again this way.

- **Being too directive when the team needs inspiration:** people still get their tasks done, but they mentally check out somewhere along the way.
- **Being too participative when the team needs direction:** opening up a long debate at eleven at night, two days before a major deadline, doesn't feel like respect. It feels like a leader who can't make a call.

Giving clear direction doesn't have to crush someone's independence. Saying "We're going with this plan, and here's why" is still clear leadership, while leaving room for people's autonomy. Being directive only starts to feel controlling once you stop explaining your reasoning.

TRY THIS

Give people a heads-up before you change your style. If you suddenly become very strict or distant without saying why, your team is likely to assume you're upset with them. Naming the shift out loud avoids that: "We're in deadline sprint mode until Friday, so I'll be making quick final calls. We'll go back to our normal way of working on Monday."

In iGEM: you have no formal power over your teammates. Nobody gets paid, nobody can be fired, and anyone can walk away at any point. You can't really bargain the way a traditional boss might, because there's nothing concrete to trade.

Inspiring and coaching will likely carry your team through most of the season. Direct instructions become essential in the frantic final days before the wiki freeze.

Coaching tends to be the most neglected tool of the eight. Since the team lead is often the most experienced person in the room, the instinct is usually to just hand people the answer. Taking ninety seconds to ask "What would you try first?" instead builds teammates who can actually run the project themselves next year.

Go deeper: *Burns, J. M. (1978). Leadership. Harper & Row Bass · B. M., & Avolio, B. J. (1991). The Full Range of Leadership Development Programs · Hersey, P., & Blanchard, K. H. (1969). Management of Organizational Behavior*

A WORD OF CAUTION

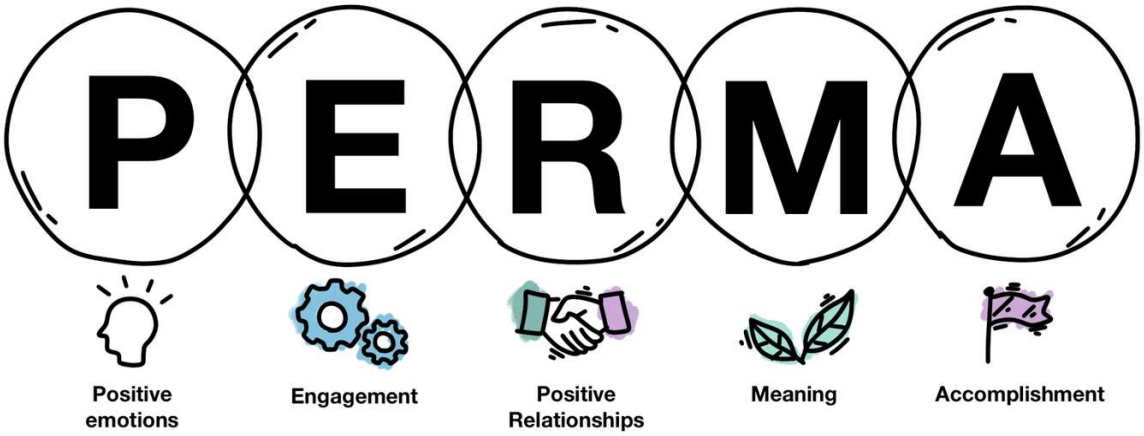
The original Burns/Bass distinction is subtler than "structure versus people": in their work, transactional leadership specifically means leading through an exchange, rewards and consequences tied to performance, while transformational leadership works through shared vision and values. The House of Competence fan borrows the spirit of that split but reorganizes it into eight more practical, everyday categories, so treat it as a useful teaching tool rather than a direct translation of the academic model.

Don't assume being inspiring is always better than being organized. A leader with plenty of passion but zero structure can make a team feel great right up until they miss every single deadline.

PERMA Lead

A team can hit every single deliverable and still be quietly miserable. Every project dashboard looks fine, because what it tracks is accomplishment, and accomplishment is really only one fifth of the full picture.

Martin Seligman mapped out the other four fifths in his PERMA framework:



These are five separate pillars of wellbeing, and none of them can really substitute for another. On its own, that's an interesting checklist, but not yet something a leader can act on. (For pros: See how the pillars tie in to Self-determination theory)

Markus Ebner turned it into something more practical with PERMA Lead, translating each of these into a concrete leadership behavior:

PERMA LEAD

Create enjoyment: actively help people enjoy their day-to-day work, rather than just enduring it until the final presentation.

Play to strengths: match tasks to what people are already good at, so they have room to get absorbed in what they're doing.

Make appreciation explicit: say the positive observation out loud, instead of assuming everyone already knows their contribution was noticed.

Supply the why: make sure every team member understands how their specific piece connects to the bigger picture.

Mark the milestones: when a target is reached, pause and acknowledge it, instead of sprinting straight to the next fire.

That last habit costs nothing, and yet teams drop it constantly. A goal that passes without any acknowledgment never really registers as an achievement. The team absorbs all the exhausting effort that went into it, but never gets the emotional payoff.

> **TRY THIS**
>
> Which of these five pillars do you notice most in your own project right now? Which one could use a bit more reinforcement?

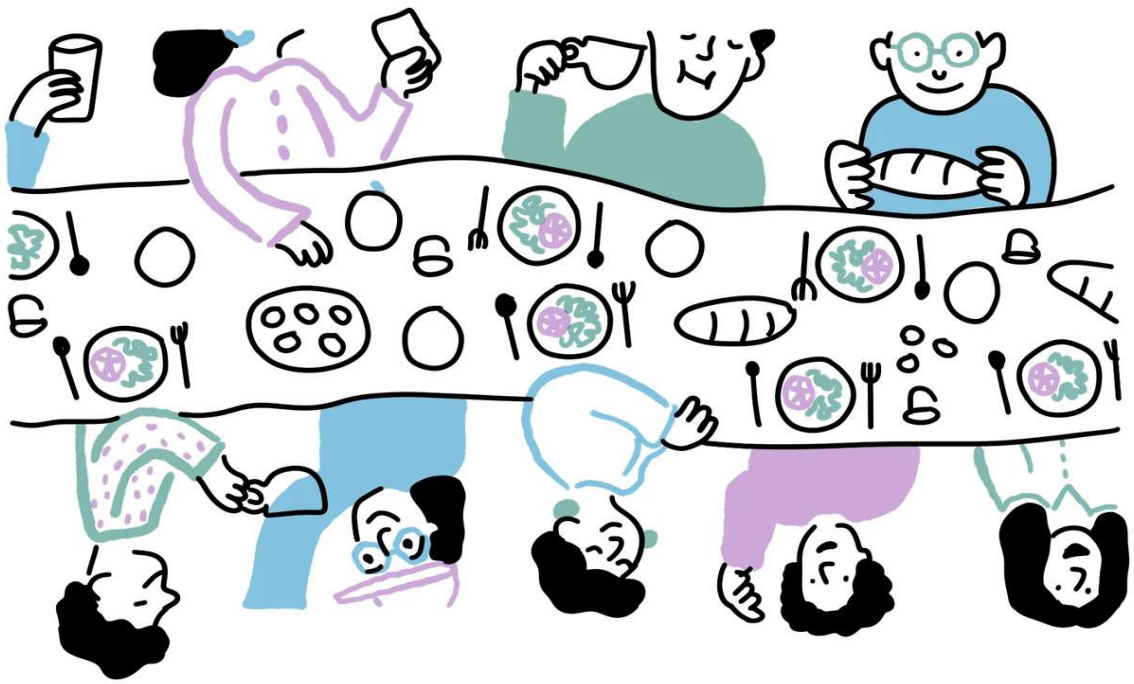
In iGEM: marking milestones costs zero budget, and almost every student team skips it anyway. Under the pressure of a fixed autumn deadline, every finished step instantly becomes the launchpad for the next bottleneck. The Gibson assembly finally works, and forty minutes later everyone's already panicking about the functional assay. It's worth stopping the room for ten minutes instead: bring out a snack, name out loud why that protocol was so brutal, and acknowledge whoever stayed late to get it done.

> **Go deeper:** *Seligman, M. (2011). Flourish. Free Press. · Ebner, M. (2019). Positive Leadership: Erfolgreich führen mit PERMA-Lead. Facultas. · Goodman, F. R., Disabato, D. J., Kashdan, T. B., & Kauffman, S. B. (2018). Measuring well-being: A comparison of subjective well-being and PERMA. The Journal of Positive Psychology, 13(4), 321–332..*

> **A WORD OF CAUTION**
>
> Above all, watch out for toxic positivity. A team responding to real structural exhaustion with a mandatory, cheerful gratitude circle has essentially inverted the whole model. Forced optimism is about the easiest thing to fake, and most teams can spot the insincerity right away.

Our kick-off Team-Retreat (Day 1 + Day 2)

You want to kick-off your iGEM year by doing a weekend just for the team? Here is the agenda we built to do exactly that. This kick-off is best timed after your team has decided on a project.



Day 1

Time	What
9:00	Arrive, breakfast buffet
9:15	Check-in
9:45	Fast friendshipping
10:00	Where lie our team-strengths?
11:00	Coffee Break
11:10	Which shortcomings do we have? Which do we have to fill as a team?
12:30	Lunch: Potluck
13:30	Energizer: The sun shines for everyone (see Energizers)
14:00	Agreeing on our internal policies regarding different aspects
15:30	Coffee Break
15:40	Project objectives
16:30	Check-out + open end

Day 2

Time	What
9:00	Arrive, Check-in
9:20	Vision Board: How could our success look like?
10:00	Subgroup work session 1
12:50	Coffee Break
13:00	Subgroup work session 2
14:00	Lunch
15:00	Energizer
15:20	Subgroup work session 3
16:20	Coffee Break
16:30	Update the team what was done today
17:00	Conclusions, Check-out + open end

PART 4

Prevention

Why the best conflict is the one you never have

Three weeks before a deadline, someone finally admits they've been overwhelmed for a month. A disagreement that could've been a two-minute conversation turns into a week of awkward silence, because nobody wanted to bring it up first. Looking back, the problem rarely came out of nowhere. It had been building for a while, quietly, in the gaps between what people felt and what they said out loud.

Most of the hardest moments in a team aren't really about the thing that triggered them. They're about everything that didn't get said earlier: expectations nobody checked, rules nobody wrote down, a weird feeling nobody named. The encouraging part is that most of this is preventable, not by avoiding conflict altogether, but by building habits that catch small issues before they turn into big ones.

This part is about agreeing early on how you want to work together, creating space where feedback and emotions can actually be shared, and knowing your own limits before you hit them. None of it guarantees a conflict-free season (no matter what you do, there will be conflict and I would be *really* concerned for your team if there wasn't any), but it's the difference between a team that falls apart under pressure and one that just talks it through.

Role clarity

“I thought that was your job?”

A lot of friction in teams isn’t really about disagreement, it’s about two people quietly assuming different things about who’s responsible for what. This page is for catching that early, before it turns into frustration or duplicated work.

Signs worth paying attention to

- Two people are doing the same task without realizing it, or nobody’s doing it at all.
- Someone says “I thought that was your job” more than once.
- Decisions get stalled because nobody’s sure who’s actually supposed to make the call.
- A task gets picked up by whoever happens to notice it first, every time.
- Someone feels like they’re doing more than their share, but can’t quite point to why.
- New team members don’t know who to ask about what.
- A role exists on paper (like “Subgroup Lead”), but nobody could explain what it actually includes.

AS A MEMBER

1. If you’re unsure whether something is your job, ask, don’t assume either way.
2. If you notice an overlap or a gap, name it factually (“I think we’re both planning the same meeting”) rather than letting it turn into quiet frustration.
3. Write down what you think your role includes, and compare notes with the person you work closest with. The gaps are often more interesting than the overlaps.

AS A TEAM

1. Before you assign “subgroup leader”, “orga member”, “facilitation” etc., make transparent what this title entails. What are the rights/ the limitations/ the duties someone with that role faces?
2. Have your role documentation in a place where everyone can look up any role at any time. If a member has a question they can look up who to go to directly. This also comes in handy when filling out your project attributions at the end of iGEM.
3. Revisit roles at natural checkpoints (after the retreat, at the project midpoint). They are not set in stone and are encouraged to be evolved (transparently).
4. Make it normal to hand off or reshape a role that isn’t working, a role is a tool for getting things done, not a fixed identity.
5. When a new person joins, make sure role clarity is part of their onboarding, not something they have to guess at. When you’ve written them down in



Process clarity

“Wait, wasn’t that supposed to happen before this?”

Two weeks before the wiki freeze, someone finally submits a reimbursement request for a conference they attended in June. Nobody remembers who’s supposed to approve it. The treasurer thinks the team lead signs off first; the team lead thought the treasurer just processes these directly. Three days and four confused messages later, the money finally goes out, a week after the deadline. Nobody did anything wrong — there just was no answer to “who does what, in what order” until the moment it was needed.

Process clarity covers two kinds of ground. One is about **decisions**: who gets a say, when something counts as final, what happens when someone disagrees afterward. The other is about **day-to-day operational steps**: how a payment gets made, who reviews a wiki text before it goes live, who has access to which account. Decisions involve judgment calls with room for disagreement; operational processes are more mechanical — less about whether something is the right call, more about knowing the steps. Both stay invisible until the moment someone needs them, which is the worst possible time to figure them out for the first time.

Decisions

Teams often disagree less about what to do than about how a decision actually gets made. Without a shared answer to that, the same disagreement can resurface over and over, dressed up as a new topic each time.

Signs worth paying attention to

- A decision gets made, and then quietly gets re-opened a week later, by someone who feels they were never really asked.
- People aren’t sure if a decision needs the whole team, a subgroup, or just the lead.
- The same kind of decision gets made differently each time, sometimes fast, sometimes with a long debate, with no clear reason why.
- Someone says “wait, when did we decide that?”
- A disagreement that’s really about process (who gets a say) gets argued as if it were about content (which option is better).
- Meetings end without it being clear whether something was actually decided, or just discussed.

AS A MEMBER

1. If you're unsure whether a decision is final or still open, ask directly, it's a completely fair question.
2. If you feel like a decision was made without your input and it affects your work, say so while it's still fresh, not weeks later.
3. Before a meeting, it helps to ask what kind of decision is actually on the table (see Very good meetings), that alone prevents a lot of confusion.

AS A TEAM

4. Map out what kinds of decisions you're likely to face. Lab decisions need different handling than financial ones, for example. If everyone keeps an eye out for processes worth defining, this doesn't all have to happen before the project even starts.
5. Once you've identified a process worth defining, answer these questions together as a team, including your supervisors if it makes sense to:
    a) Into which steps can we break this process down?
    b) Who does what, and when? Who needs to be involved?
    c) At what point is feedback actually needed? When does it become too late to use?
    d) Who holds oversight over the whole process, even if they're not responsible for any single step?
6. Make it visible, and provable, when something has actually been decided, in writing, somewhere everyone can find it (see Very good documentation), not just "what we said in that one meeting."
7. Build in one explicit way to reopen a decision if real new information comes up, that's different from re-litigating it just because someone's unhappy with the outcome.
8. When in doubt, over-communicate which stage a decision is at: being discussed, being decided, or already decided.

Day-to-day work

This is the more operational side: the recurring, mechanical steps that keep a project running, separate from who decides what.

Signs worth paying attention to

- Something that should take ten minutes (ordering a reagent, approving an expense) takes three days because nobody knows the steps.

- A wiki page goes live with mistakes nobody caught, because nobody was clearly responsible for checking it.
- The same task gets handled completely differently depending on who happens to do it.
- People quietly avoid starting certain tasks because they're not sure how, or who to ask.
- A password, login, or document only one person has access to, and that person is unreachable right when it's needed.
- Someone finds out about a step in a process (an approval, a review, a sign-off) only after skipping it by accident.
- Feedback gets given at a point where it can't be included in the result anymore.

AS A MEMBER

1. Before you need a process, ask how it works, not in the middle of trying to use it.
2. If you figure out how something works by trial and error, write it down somewhere others can find it, future you (and your teammates) will thank you.
3. If a process genuinely doesn't exist yet, say so, that's useful information for the team, not a personal failure.

AS A TEAM

1. List out your actual recurring processes, concrete operational steps: paying for things, publishing to the wiki, ordering materials, onboarding a new member, posting on instagram etc.
2. For each one, write down the steps and who's responsible at each step, even roughly. A short, imperfect written process beats a perfect one that only exists in someone's head.
3. Store these somewhere everyone can find them (see Very good documentation), not in one person's memory or inbox.
4. If it fits, add a short retrospective to each round of a process. Make the last step reflecting together on how it went, and answer:
    a) What went well?
    b) What could have gone better?
    c) What do we want to try next time, and what do we want to leave out?

This way, your processes get a little better each time you go through them.

When Leadership isn't working

Not everyone is made to lead and that's ok

Sometimes a person steps into a leadership role and it just doesn't click, not because they're a bad person, but because the role doesn't fit them, or they haven't learned the skills for it yet (see The Leadership Fan). This page is for recognizing that early, and for handling it as a team without it turning into a personal attack on anyone.

Signs worth paying attention to

- Decisions get made without input, and people find out after the fact.
- Feedback to the lead disappears without a response, or gets brushed off.
- People start working around the lead instead of with them.
- Mistakes get blamed on individuals instead of looked at as a team.
- The same person always makes the final call, even on things outside their role.
- Meetings regularly run over, go in circles, or end without clear next steps.
- People stop bringing up concerns in meetings and only vent about them afterward, privately.
- A lead reacts to pushback with defensiveness instead of curiosity.

One or two of these on a stressful week isn't a crisis, but a pattern that keeps repeating is worth naming and looking into.

AS A MEMBER

1. Check whether others see it too, talk to one or two teammates you trust, one-on-one, before raising it as a group.
2. Separate the behavior from the person, name what's actually happening ("decisions aren't being shared before meetings"), not a verdict ("they're a bad leader") → see Nonviolent communication
3. Give direct feedback first, before escalating (see Very good feedback), most people can adjust once they actually know there's a problem.
4. If feedback doesn't change anything after a fair attempt, bring it to the team and agree on how to raise it together.
5. If it's a safety or wellbeing issue, not just a leadership style issue, don't wait, loop in your advisors or mentors directly.

IF IT'S YOU IN THE ROLE

1. Ask directly, early and often: "What would make this easier for you to work with me on?"
2. If you notice people going quiet around you, that's information, not proof everything's fine.
3. It's okay to step back from a role that isn't working for you. Handing it off isn't failure, staying in a role you're struggling with, silently, usually costs the team more.
4. Leadership is learnable (see The Leadership Fan), a rough start doesn't mean you're not cut out for it.
5. If you are not sure how well a situation played out for the team, ask for feedback actively.
6. If you realize that you made a mistake, make it transparent and talk it through with the whole team to prevent it from happening again. This is also a great opportunity to say sorry if necessary (see psychological safety).

AS A TEAM

1. Agree early, before anything goes wrong, on how leadership decisions get made and who can raise concerns about them (see the Psychological Contract).
2. Keep leadership roles reviewable and have that agreed upon by anyone who takes up a leadership role. A fixed, unquestionable role for an entire season makes this harder to fix later.
3. Everyone should have clarity of who to go to, if the team itself cannot resolve the issue anymore. Not knowing the exit builds pressure on pretending everything is fine.
4. Remember: addressing this isn't about punishing someone. It's about making sure everyone can actually do their work well and do their part for the project to succeed.
5. Maybe the type of leadership structure you're working with is not right for the constellation of the team. Some constellations work better with strict hierarchies and others don't. You can decide on what to go with first, but keep an eye out and actively reevaluate how well this type of leadership is working for the team and the project.

Very good documentation

The hill we'll die on

Good documentation is easier said than done. It's always either too detailed or not detailed enough. The guiding question should always be: If I didn't attend this meeting, which key points do I need to know to be up to speed? Not only does this help people who missed a session, it also creates a reliable record of which decisions were made. This moves conflicts being about who remembered what, to actual discussions in terms of content.



Here comes what proved to be useful to us:

1. **Dedicated space**

   It doesn't matter which tool or platform you use, have one database where all of them are added to. Have all logs be able to be filtered by meeting type and sorted by date, newest at the top. Now anyone can look up any log of any meeting.

2. **Dedicated person**

   For each meeting (or at least every type of meeting), there should be a person designated to keep protocol. They are responsible for the respective log and are encouraged to ask follow-up questions if something has to be made clearer for documentation.

3. **Templates**

   Creating templates for each meeting type has been our holy grail. It takes the mental load off of remembering all important cornerstones and makes it as easy as filling out a form which you are given the answers to, so anyone can do it!

Date: 30.02.2042 **Meeting**: Fundraising Meeting

Attendees: Nicole, Medina, Ling Li, JC, Pascal

Facilitation: Nicole

Protocol written by: JC

Agenda points *(listed in advance, contents filled in using bullet points during the meeting)*:

- **Agenda point 1**: Update from last weeks To Dos

  → What happened since the last meeting?

  - Subgroup Notion page was updated, thanks JC!
  - Sponsoring Portfolio is almost done (sorry for the delay! - Medina)
  - The logo banner for the wiki has been created with the wiki subgroup (Ling Li)
- **Agenda point 2**: Sponsoring Promega

  → We need to contact Promega

  - Email address unclear
  - Nicole will find it out and contact Promega regarding a sponsorship
- **Agenda point 3**: Bank account verification

  → Our bank account needs verification

  - Who's identity is connected to our bank account? → Tamer
  - Ling Li will verify the bank account with Tamer
- **Agenda point 4**: Deliverable external attribution

  → We need to keep track of who sponsored what to fill out the attributions form in the end

  - A Notion Page will be created to track commitments → Medina
  - It is also Medina's responsibility to keep it up to date during the season

Resulting to-dos:

- writing Email to Promega → Nicole (Due: 17.3.27)
- Update subgroup leaders on fundraising status → Pascal (Due: next friday)
- Verify bank account → Ling Li (Due: tomorrow)
- Notion Page Sponsorings → Medina (Due: tomorrow)

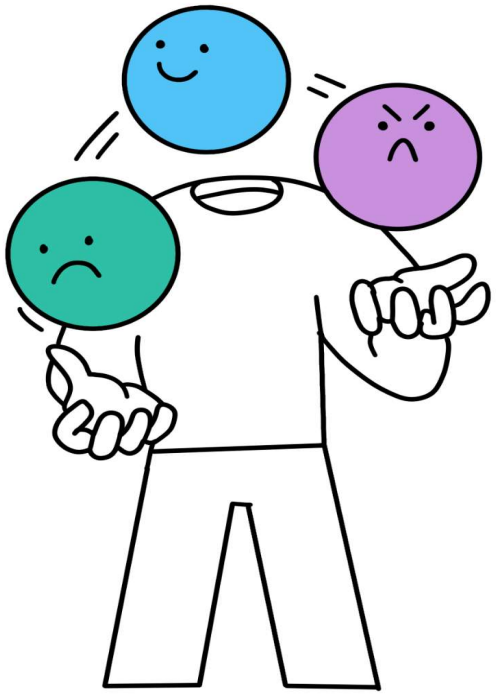
Emotions and Emotional Agility

There are two ways to sit quietly through a rough meeting, and they cost very different amounts of energy.

In the first, you decide early on that the critique is about the lab protocol, not about you. The irritation never really catches fire, because you've already changed what the situation means to you. In the second, the anger hits you at full strength, and you spend the next forty minutes just trying to keep it off your face. From the outside, both look exactly the same: someone sitting quietly.

Researcher James Gross separated these into **two distinct mechanisms**.

Reappraisal happens before the emotion fully takes hold, you reframe the situation early, which tends to lead to better moods and steadier relationships.



Suppression happens after the feeling has already hit, you force yourself to look calm, which tends to leave you more strained and in a worse mood. Suppression also does something odd to memory: people who hide their emotions during an argument often remember much less of what was actually said. Staying outwardly calm takes real mental effort, and that effort gets pulled away from actually following the conversation.

One of the simplest ways through this is to name what you feel. Putting a feeling into words seems to genuinely calm the emotional centers of the brain, and it helps to be specific. People who can tell the difference between disappointed, embarrassed, or just exhausted tend to handle their feelings better than people who lump everything under "bad" or "stressed."

Susan David's work offers a helpful way to structure this, here adapted into four simple steps:

THE 4 STEPS

- **Notice** that you're reacting at all, easy to miss when you're busy.
- **Name it precisely.** Instead of "stressed," try disappointed, embarrassed, or tired of being the only one checking the tubes.
- **Accept it.** Fighting a bad feeling usually just keeps it around longer.
- **Act on what matters to you**, based on your goals, not on whatever the feeling is shouting at you in the moment.

For a project team, this isn't amateur therapy (more on where that line sits in the First aid kit). It's really just building a shared vocabulary, so that saying "I'm frustrated with this protocol, not with you" becomes something anyone can say without it feeling like a big deal. If this sounds familiar, it connects closely to what we cover in Needs and in Nonviolent Communication.

TRY THIS

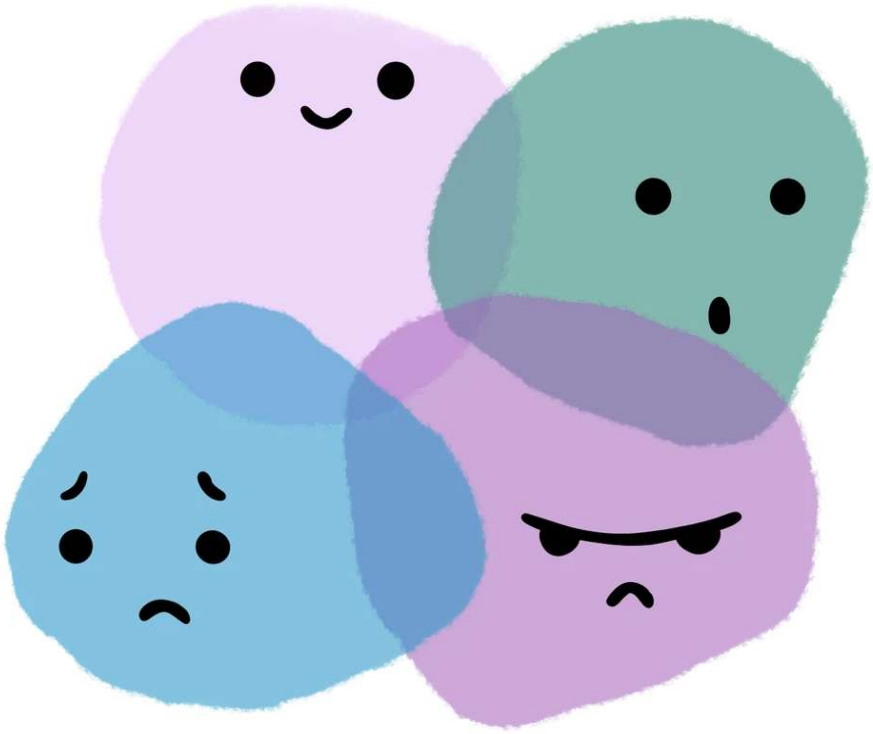
skip the generic "How's everyone doing?" at the start of a meeting, people just say "fine" anyway. Instead, ask for two quick things from each person: one word for how they're arriving right now, and one short sentence on what's causing it. For example: "Tense, our sequencing results come back tomorrow." Nobody debates it, nobody tries to fix it, and the meeting just starts. The value is in being specific, without turning it into a long discussion.

In iGEM: when experiments ruin your weekend plans, team chats can turn bitter fast. If teammates get used to saying "I'm exhausted and angry that this plate didn't grow," everyone can focus on fixing the science together instead of quietly wondering who's upset with whom.

Go deeper: *Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes. Journal of Personality and Social Psychology, 85(2), 348–362. · Lieberman, M. D., et al. (2007). Putting feelings into words. Psychological Science, 18(5), 421–428. · David, S. (2016). Emotional Agility. Avery. · Hayes, S. C., et al. (2006). Acceptance and commitment therapy. Behaviour Research and Therapy, 44(1), 1–25.*

A WORD OF CAUTION

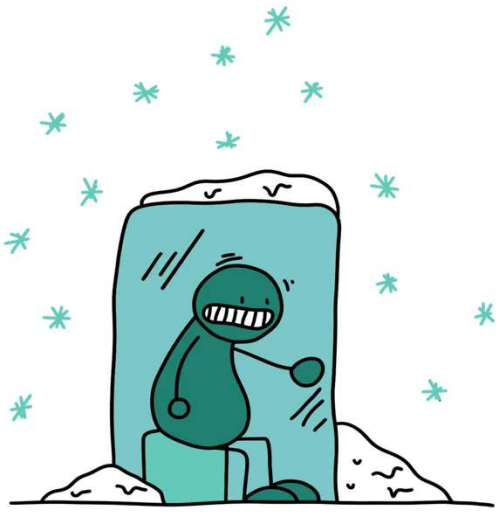
The brain-scan study on labeling feelings used a small sample from a field with mixed replication results, so treat that specific mechanism as interesting rather than settled fact. Also, hiding your emotions isn't always the wrong move, biting your tongue is a perfectly valid choice when speaking up might actually get you punished. And one hard line worth drawing: this is a tool adapted for a project team, not an invitation to turn meetings into group therapy. A quick check-in round isn't the place to process deep personal struggles. If real distress comes up, it's better addressed privately, outside the meeting, with professional support brought in where needed.



Stress Modes

Flight, fight or freeze!

The sequencing results come back failed on a Thursday afternoon. By evening, one teammate is already rewriting the whole protocol. Another goes silent for three days. A third quietly takes on two extra lab chores nobody asked for. Same news, same team, same room.



Nobody consciously chooses these reactions. Under pressure, the brain narrows down to whatever habit worked best in the past and then applies that same reflex to almost everything.

Stress isn't really an event, it's more of a quick mental calculation. Lazarus and Folkman showed it comes down to two split-second checks: is this a threat to something I care about, and do I have the resources to handle it? Both are fast, subconscious guesses, which is why two people can read the exact same email and land on completely different answers. This is also why arguing over whether something is "objectively stressful" rarely goes anywhere, stress lives in the gap between the demand and what you feel equipped to handle.

Once that threat registers, people fall back on fairly predictable coping habits:

COPING HABITS

- **Tackling the problem directly:** effective when the problem can actually be moved, exhausting when it can't.
- **Reframing:** changing what the event means rather than the event itself, often the most powerful and most underused option.
- **Asking for help:** reaching out for concrete support, one of the strongest predictors of long-term resilience.
- **Venting:** can feel like asking for support, but just replaying frustration without seeking a solution tends to keep the nervous system on edge.
- **Distracting yourself:** fine in short bursts, damaging as a permanent escape.
- **Checking out mentally or physically:** sometimes a necessary temporary shield, but often an early sign of burnout.

Beyond fight or flight, there's also **freezing**, a third well-documented response. It rarely looks like panic. More often, it looks like a slow week where emails sit unopened and small decisions keep getting pushed back.

Timing matters here. In the middle of an October crunch, almost nobody has the distance to say, "I'm taking on extra work just to avoid feeling out of control." In July, that same pattern is much easier to spot. Naming these habits while things are calm (see also Hulk Mode) builds a shared vocabulary for later, the difference between someone saying "I'm in my stress pattern" and a teammate assuming "you're just being difficult."

TRY THIS

Early in the project, have each person write three honest lines about themselves, never about a teammate: what the team notices first when they're overwhelmed, what genuinely helps them in that state, and one early tell that gives it away before they even notice it themselves.

Go deeper: *Lazarus, R. S., & Folkman, S. (1984). Stress, Appraisal, and Coping. Springer. · Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies. Journal of Personality and Social Psychology, 56(2), 267–283.*

A WORD OF CAUTION

People are notoriously bad at predicting how they'll actually act under real pressure, so if someone's behavior in a crisis doesn't match what they wrote in the summer, that's not a failed exercise, just new information. And never let this vocabulary become an excuse, "that's just my stress mode" shouldn't be a free pass to treat people poorly. These are temporary patterns to recognize, not justifications to hide behind.

Declared Loadlimit

This is where I draw the line



Nobody raises their hand and announces they've hit their limit. Instead, they reply half a day late, then two days late, then not at all. The week someone visibly burns out is almost never the week they actually became overwhelmed, usually, it's weeks after the real breaking point.

The core issue is simple: if you never say your limit out loud, the only way your body can enforce it is by failing.

Sonnentag and Fritz's research on recovery suggests that what predicts burnout isn't raw hours at the desk so much as a lack of psychological detachment, whether your brain actually leaves the project when your body walks away. You can work a modest week and still end up depleted if the team lives in your head all night.

People also manage this differently, and neither way is broken. **Separators** need a clean, hard wall between work and life. **Integrators** are comfortable letting the two blend together. Friction rarely comes from either style on its own, it comes from an unstated mismatch, like a teammate who badly needs a wall working alongside a group that assumes nobody has one.

A declared limit is one sentence, said out loud before a crisis hits, usually around a single specific constraint:

LOAD LIMITS

- **A time:** "I don't check project chats after ten at night."
- **A day:** "Sundays are off-limits, everything else is open."
- **A volume:** "I can take on one more task this month, not two." (Your answer to the weekly-hours question in Goals & Limits is a good starting point here.)
- **A channel:** "Call me for a true emergency, I won't see chat pings."
- **A type of work:** "I'll handle lab prep, but I can't chair another meeting."

Where exactly you draw the line matters far less than making sure the team has actually heard it. Holding it gets much easier with an if-then plan (see WOOP): instead of deciding in the heat of the moment, you set the rule in advance, "If someone messages me after ten, I'll leave it unread until morning."

In our own survey, a large majority of respondents said they thought about the project outside working hours often or very often, and most regularly worked past what had been agreed. This didn't come down to personality, it came down to workload. That makes it a structural issue, not a personal weakness.

TRY THIS

Have everyone write down one personal limit and one if-then rule, then share both in the same check-in. Afterward, pick one collective rule the whole group will actually defend, a late-night messaging curfew, say, or one fully quiet weekend day, and post it somewhere new members will see it. Also see our chapter on Goals & Limits

In iGEM: in a volunteer project with no pay, no formal boss, and a ticking clock, boundaries blur fast. Because anyone can work at 2 a.m., people start assuming everyone should. Saying your off-hours out loud protects your teammates from feeling guilty about stepping away too.

Go deeper: *Sonnentag, S., & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model. Journal of Organizational Behavior, 36(S1), S72–S103. · Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work. Academy of Management Review, 25(3), 472–491. · Gollwitzer, P. M., & Sheeran, P. (2006). Implementation intentions and goal achievement. Advances in Experimental Social Psychology, 38, 69–119.*

A WORD OF CAUTION

Most of this research comes from paid workplaces with contracts that eventually end, a high-intensity student competition runs under different social pressure. And watch out for the fastest way to ruin this exercise: a lead who sets a boundary and then breaks it by pinging the group at midnight over something non-urgent. If the leader doesn't hold the line, nobody else will believe it's real either. Remind each other of your limits, and take care of one another.

Psychological safety

“I feel vulnerable saying this, but…”



Psychological safety means everyone in the group believes it’s safe to take an interpersonal risk, that asking a basic question, admitting a mistake, or challenging a team lead won’t be held against them.

It belongs to the room, not to the person. A student who speaks up boldly in one group might sit completely frozen in another. When a team goes quiet, it’s rarely because you happened to recruit quiet people, it’s usually because the room doesn’t feel safe for honesty.

It also gets mixed up with four things it isn’t:

DON’T MIX THESE UP

- **Not comfort.** The goal is high safety paired with high standards. High safety with low standards just creates a cozy club that never actually gets anything done.
- **Not niceness.** A group where nobody ever argues usually has very low safety, not high safety, people are smiling to protect themselves, not because things are fine.
- **Not a personality trait.** You can’t fix this by telling shy people to be braver. The environment has to change first.
- **Not constant agreement.** Safety doesn’t mean avoiding debate. It’s actually the foundation that lets teammates argue passionately about ideas without taking it personally.

Research links higher psychological safety to more shared information, faster learning, and stronger team performance.

One of the biggest drivers of safety costs nothing at all: how the lead reacts to their own mistakes. When a lead says out loud, “I messed up that protocol calculation yesterday, here’s how I’m fixing it,” it gives everyone else permission to be human too. Watching someone senior own an error does more for team culture than an expensive workshop ever could.

If the room is psychologically safe…

… mistakes are openly discussed, not hidden or covered up.

… questions and criticism are raised by all members, not just the most senior or confident ones.

… jokes are being made, people feel relaxed enough to be a little silly sometimes.

… people ask for help before a small problem turns into a big one.

… disagreements get argued out loud, instead of being settled by who stays quiet longest.

… someone can say "I don't understand this" without it feeling like a confession.

… newer members speak up just as often as the people who've been around longest.

In iGEM: experiments fail daily in synthetic biology. If students feel scared of looking foolish, they hide contaminated cultures, avoid asking how to use expensive equipment, and nod along in meetings when they don't actually understand the design. Making it safe to say "I don't understand this plasmid map" can save weeks of wasted reagents, and prevent real mistakes before the wiki freeze.

> **Go deeper:** *Edmondson, A. (1996). Learning from mistakes is easier said than done. The Journal of Applied Behavioral Science, 32(1), 5–28. The study behind the finding that high-performing teams actually report more errors, not fewer, because they're not afraid to admit them. · Edmondson, A. (2018). The Fearless Organization. Wiley. The fuller argument for "not comfort" above. · Frazier, M. L., et al. (2017). Psychological safety: A meta-analytic review and extension. Personnel Psychology, 70(1), 113–165.*

> **A WORD OF CAUTION**
>
> Pop management books have watered this concept down into "making everyone feel comfortable." That's actually the opposite of Edmondson's work. Psychological safety isn't a shield against accountability, it's the trust that lets you hold each other to high standards without fear.

Our Teams' favorite vegan brownies

Ingredients

180 g flour

50 g cocoa powder

15 g egg substitute (e.g. chia seeds)

1,5 tsp baking powder

1 sprinkle of salt

180 g sugar/ sweetener

180 ml plant milk

120 g neutral oil

1 tsp vanilla extract

300 g raspberries (fresh or frozen)

50 g chocolate chunks

1. Preheat the oven to 180°C (top and bottom heat).
2. Lightly grease a 28 x 18 cm brownie pan (or one of a similar size) and line it with parchment paper.
3. Mix the flour, cocoa powder, ground flaxseed, baking powder, and salt in a bowl. Then add sugar, plant-based milk, oil, and vanilla extract, and stir everything into a smooth batter. Pat fresh berries thoroughly dry after washing. Do not thaw frozen berries.Instead, toss them in cornstarch so they don't make the brownies soggy. Finally, fold in two-thirds of the raspberries.
4. Pour the batter into the prepared pan and smooth the surface. Distribute the remaining third of the raspberries on top and optionally brush them with a little agave syrup to keep them juicy. Sprinkle with chocolate chips if desired, and bake the brownies for 25–30 minutes, or until they reach your preferred consistency. (The longer you bake the brownies, the drier they become; if you prefer them moister, avoid overbaking.)
5. Let the brownies cool for 20 minutes. Then, use the parchment paper to lift them out of the pan. Once completely cooled, cut into squares and enjoy.
6. Bon appétit!

This recipe follows Bianca Zapatka's original recipe and was adapted/ translated for this TeamKIT.

Communication rules

Group habits form quickly, and mostly by accident. Someone replies late once, someone drops a meme in the wrong channel, nobody speaks up when a deadline shifts, and suddenly those accidents have become the unwritten law of the group. Connie Gersick's research (see Stages of Team Development) found that how a team behaves in its very first meeting tends to stick almost all the way to the midpoint of the project, whatever messy habits you start with in week one, you'll likely still be living with in midsummer.

For a student team, the habits that actually make or break collaboration are pretty unglamorous:

- **Which channel is for what.** Without a decision, serious updates get buried under jokes and memes.
- **What counts as an emergency.** If anyone can ring the alarm bell for small problems, people start ignoring every alert.
- **How fast to reply to normal messages.** "Within 24 hours" is a perfectly fine rule, as long as everyone actually knows it.
- **What silence means.** Does no reply mean agreement, or that nobody saw it? Everyone tends to assume something different, and nobody checks.
- **When to stop typing.** Someone needs permission to say, "This chat is getting messy, let's do a three-minute call instead."

None of these cause dramatic blowups, which is exactly why they're dangerous. Unclear reply times are a common source of quiet frustration between people who actually like each other, nobody says anything, but the annoyance builds anyway.

If your team is starting fresh with no older students to guide you, this matters even more. You have no traditions to copy, so whatever happens in your first few meetings tends to become your permanent culture.



TRY THIS

Consciously structure your communication (and documentation) channels in the beginning. For us a WhatsApp community with different channels for each subgroup, organisation, off-topic and smaller taskforces worked perfectly fine. State clearly in each group what it is for and use member labels for each group to declare your role or status (active/ inactive) in it.

In iGEM: because student teams talk at all hours, bad habits turn toxic fast. If one person replies at 2 a.m. and another takes two days, both can end up feeling disrespected by the other. Agreeing on a few simple ground rules early removes most of that friction. (This ties closely into the Psychological Contract and Declared Load Limit chapters, worth agreeing on all three together.)

Go deeper: *Feldman, D. C. (1984). The development and enforcement of group norms. Academy of Management Review, 9(1), 47–53.. · Mathieu, J. E., & Rapp, T. L. (2009). Laying the foundation for successful team performance trajectories. Journal of Applied Psychology, 94(1), 90–103.*

A WORD OF CAUTION

Don’t write a giant rulebook nobody will read. Ten polished rules everyone ignores is worse than no rules at all, it teaches the team that agreements don’t really matter. Pick the few simple rules that solve your actual day-to-day pain, and stick to them.

Tension based work

What do you need?

When working together on a multifaceted project, often issues arise that do not fit into any agenda point of the meeting plan. Nevertheless they bother us and feel like a pebble in our shoes. This is where tension based work comes in.



What are tensions?

A tension happens, when there is a distance between what *is* and what *should be*. This can be entirely subjective, nevertheless we should create spaces to discuss these discomforts.

What kinds of tensions are there?

To best be able to solve a person's tension, they must categorize the tension in one of four groups:

1. Share information
2. Ask for information
3. Ask for feedback
4. Propose a To Do

By stating up front what they need from the team, it makes it easier to resolve the tension.

How do we operate with tensions?

Best practice is to keep a repository for tensions. Anyone can jot one down at any time, so that they do not have to remember until the next fitting meeting. This repository should be a database where you can check off discussed tensions, without deleting them.

Each tension should be assigned to a type of meeting and have a property called "What do you need?". This is where you choose one of the four tension-categories. It should be clear who had this tension.

For implementation it is a good idea to have the last agenda point of every type of meeting be "open agenda" or "tension resolving". You can filter the repository by the meeting you're in and work through the accumulated tensions and check them off once you've resolved them. **Tensions are resolved when the person who brought it up can say: "I got what I needed."**

For facilitators

Facilitating tensions can be difficult, personal and unpredictable. Some tensions may cause bigger discussions or you may find that this meeting turned out not to be the right setting for this tension after all. It is okay to abbreviate a discussion. Here are some guiding questions, if you are unsure if a discussion should be deferred:

QUESTIONS FOR GUIDEANCE

- Is the conversation still in service of the purpose of this meeting?
- How big of a cut can I give this conversation regarding the time span of the meeting?
- Does this conversation concern more than half of the attendees?
- Would it be more helpful to create a separate/ follow-up meeting to solve this tension?
- Would it be more helpful for a smaller/ different group to handle this tension in another setting?

This method is very effective and boosted productivity for us. Most of the time tensions coming from the team point to the direction where the project lacks clarity or attention. These points are always worth exploring. Who knows, maybe your next breakthrough only lies behind the next tension?

Go deeper: The idea of tensions comes from Holacracy (HolacracyOne & Robertson, 2015). The four "What do you need?" categories are our own adaptation, inspired by the tactical meetings in Holacracy.



Feedback

A vital pilar of Teams

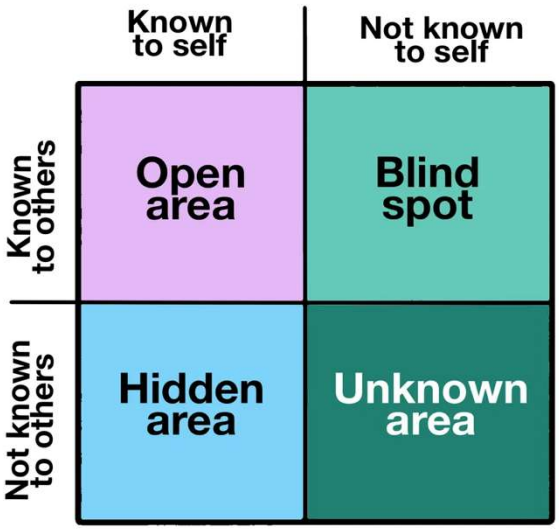
Picture a window with four glass panes, mapping what you know about yourself against what your team knows about you:

Open: what both you and your team see clearly.

Blind spot: what others notice about you, but you can't see yourself.

Hidden: what you know about yourself, but keep from the team.

Unknown: talents or habits nobody has discovered yet.



Honest feedback shrinks your blind spot. Speaking up honestly shrinks what's hidden. Both make the open pane bigger, and that's where real teamwork actually happens.

Here's the catch though: feedback often backfires. When researchers looked across hundreds of feedback studies, they found that in more than a third of cases, feedback actually made people perform worse. It mostly comes down to where you point the finger. Pointing at the task helps someone fix the mistake. Pointing at the person makes them feel attacked, and they spend their energy defending themselves instead of solving the problem. (See Very good feedback for a concrete structure that keeps feedback aimed at the task.)

ALWAYS KEEP IN MIND

- **Aim at the task, not the person.** This single shift decides whether feedback actually helps.
- **Make it normal to ask for feedback, not just to receive it.** Asking for feedback is genuinely hard, people worry it makes them look incompetent, and if asking feels risky, they simply stop asking, and problems stay hidden.
- **Balance correction with recognition.** A team that only speaks up when something breaks is exhausting to be part of (see Appreciation).
- **Keep it specific and timely**, vague or delayed feedback rarely lands the way it's meant to.

TRY THIS

Give our guide on very good feedback a try, next time you get a chance!

In iGEM: protocols fail constantly in the lab, and it's easy to feel like a failed experiment makes you a bad scientist. Make it clear, again and again, that a ruined assay is a technical bug to solve together, not a personal flaw. That's what keeps people coming back to the lab with confidence.

Go deeper: *Luft, J., & Ingham, H. (1955). The Johari window. Proceedings of the Western Training Laboratory in Group Development. UCLA. · Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance. Psychological Bulletin, 119(2), 254–284. · Ashford, S. J., & Cummings, L. L. (1983). Feedback as an individual resource. Organizational Behavior and Human Performance, 32(3), 370–398.*

A WORD OF CAUTION

This model is meant to help you work together better, not to turn your team meetings into therapy sessions. Nobody needs to share deep personal secrets for this to work, keeping the focus on how you collaborate is enough, and that's okay. And please don't mistake "more feedback" for "better feedback." If people start criticizing each other without learning to aim at the task first, it can leave everyone feeling a little more guarded instead of closer, so take it slow, and be kind to each other while you practice this.

Very good feedback

Anyone is bound to behave in a way they are unaware of (see Feedback). Feedback is a great way to give the recipient the opportunity to actively pursue or avoid an observed behavior in the future. So how do we give it respectfully?



1. **Ask permission**
   Even if feedback has to be seen as a gift,
   there is a time and place for it. That is up to the recipient to decide.

2. **Describe the situation**
   Give context to your observation and describe what you perceived in a concrete and factual manner. Be as specific as possible.

3. **Name your feelings**
   Conclude from your observations which feelings they caused in you. State your emotions without accusations.

4. **Share the needs/values affected**
   Go deeper and share with the person how their behavior affected your needs or values. This can either be alignment or conflict.

5. **Make a positive, concrete, future-oriented request**
   Again, be as concrete as possible. This can be an offer for the recipient to reconcile if they understand their behavior should have been better. Or an invitation to show observed characteristics more often.

6. **Listen to the other party**
   Give the recipient a chance to share their perspective. Maybe there was a reason why they did what they did. Make sure to be empathetic and listen in an active manner.

7. **Find agreement**
   Ask the recipient if your request is acceptable for them. If not, figure out another solution that works for both sides.

This guide is based on non-violent communication.

EXAMPLES

1. Hey! I'd like to give you some feedback. Is now a good time?

2. Last friday you were texting during our all-hands meeting. Every time I looked around at everybody, I saw that you were on your phone.

3. As the facilitator of this meeting I felt irritated. I was upset that you were not paying attention to the meeting while we were sharing very important updates.

4. My need to feel that my time is respected was not met.

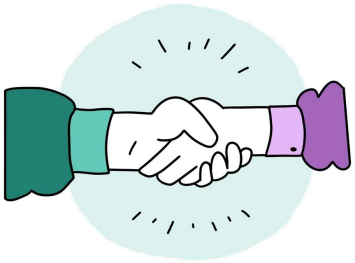
5. I would like for you to be attentive during our future meetings.

6. Is there anything I am missing from your point of view?

7. I did not know that you are having family issues, I am sorry to hear about that. Would it be okay if we agreed on being transparent if something has come up? You don't have to share what's going on, just give me a heads up that you are dealing with something during the meeting. Does that work for you?



The Psychological Contract



Everyone joins a team holding a contract that nobody ever signed. It lives entirely inside your head, what feels reasonable to ask of you, what you expect in return, and what you quietly believe should happen if you can't deliver. Psychologist Denise Rousseau called this the psychological contract: personal assumptions about mutual promises that feel like obvious facts to you, but that no two people actually share in the exact same way.

Here's the part worth understanding on an individual level first: these assumptions aren't something you chose on purpose, they were built up quietly, shaped by past teams, upbringing, or just what felt normal to you. That's true for every person on your team, and it means a disagreement that looks like it's about a missed deadline is often really about two people holding different unspoken expectations, neither of which was ever said out loud.

On a team level, this becomes something worth actually talking through together. A few of the unwritten questions that tend to matter most:

- **Who has the final say** when the team disagrees?
- **What happens when someone falls behind**, do they ask for help right away, or go quiet and hope it resolves itself?
- **Is "I don't have time" an okay thing to say**, or does it feel like admitting failure?
- **How does disagreement happen**, openly in the group, or more privately?
- **What is everyone actually here for**, a resume line, new skills, friendships, winning? People often don't say.

In our opinion sometimes it feels awkward to spell these things out. Some things are okay the way they are and do not need to be pointed out when there is no conflict potential. For us, it is so much more important that each member knows that these unspoken rules exist, reflect on them individually and be able to talk about them, once they know that it doesn't sit right with them (see psychological safety).

In iGEM: without salaries or formal contracts, these unspoken expectations carry a lot of the weight. Naming them together in May can spare everyone a much harder conversation in October.

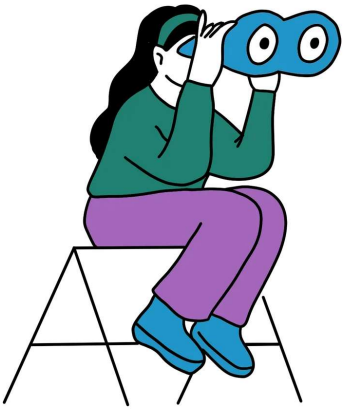
Go deeper: *Rousseau, D. M. (1989). Psychological and implied contracts in organizations. Employee Responsibilities and Rights Journal, 2(2), 121–139. · Robinson, S. L., & Rousseau, D. M. (1994). Violating the psychological contract. Journal of Organizational Behavior, 15(3), 245–259.*

A WORD OF CAUTION

This research mostly comes from paid workplaces with formal contracts, a volunteer student team runs on different stakes, so be gentle with each other as you figure this out together. And once you've written your agreements down, try to hold them lightly: they're there to support each other, not to be pulled out as proof that someone broke a rule. Written with enough care, they should feel fair even to the person who's currently struggling to meet them.

WOOP

Manifesting your goals won't do



Imagining your goals in vivid detail feels like it should help you reach them. Picture the final award ceremony, the presentation going smoothly, your team's name being called. It's motivating to think about, and it's also, somewhat counterintuitively, part of the problem.

This is Gabriele Oettingen's central finding, and it runs against most standard motivational advice. When you vividly imagine an ideal future, your brain and body relax a little, almost as if the outcome has already happened. Effort tends to slide downhill from there. The daydream isn't practice for the hard work ahead, it quietly pays out some of the emotional reward in advance, leaving less drive for the messy parts still to come. This pattern shows up across weight loss programs, job hunts, exam prep, and physical rehab.

What seems to actually help is pairing the dream with a clear-eyed look at what stands in the way. First, picture the future you want. Then, just as clearly, picture the specific thing inside you that tends to get in the way. Oettingen calls holding both at once mental contrasting: if the goal feels realistic, this combination tends to sharpen focus and effort; if it turns out to be unrealistic, it can help you let go of it sooner, which is its own kind of relief.

Peter Gollwitzer adds one more piece: the if-then plan. A sentence like "When X happens, I will do Y" lets you decide in advance, while you're calm, rather than relying on willpower once you're tired, stressed, or in the middle of things.

Put together, this becomes **WOOP**:

WOOP

1. **Wish:** a goal for the coming weeks that's challenging but achievable.
2. **Outcome:** the best result of reaching it, imagined in some detail.
3. **Obstacle:** the thing inside you that tends to get in the way, not the deadline or the equipment, but something like "I go quiet in meetings when I know a timeline is unrealistic."
4. **Plan:** a simple if-then rule for that obstacle, "If [this happens], I will [do this]."

Projects on a tight timeline rarely fail because people lacked a vision for them. More often, it's the small personal habits nobody planned around.

In iGEM: everyone pictures winning in Paris, but getting there means running tedious purification columns on a rainy Tuesday. WOOP helps shift the focus from that distant stage to the actual bottleneck, often something as ordinary as procrastinating on a protocol or putting off the wiki until the last week.

Go deeper: *Oettingen, G., Pak, H., & Schnetter, K. (2001). Self-regulation of goal setting. Journal of Personality and Social Psychology, 80(5), 736–753. · Kappes, H. B., & Oettingen, G. (2011). Positive fantasies about idealized futures sap energy. Journal of Experimental Social Psychology, 47(4), 719–729. · Gollwitzer, P. M., & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. Advances in Experimental Social Psychology, 38, 69–119. · Oettingen, G. (2014). Rethinking Positive Thinking. Current.*

A WORD OF CAUTION

Much of the published evidence on WOOP comes from the lab that created it. Independent studies exist, but the overall body of evidence is smaller than the popularity of the method might suggest, so hold it as a useful tool rather than a guarantee. And importantly, WOOP only works on your own behavior, you can't set someone else's internal obstacle for them. Using it to try to manage a teammate's habits will just leave you with a plan that isn't really yours to carry out.

Appreciation

Teams are usually quick to notice when something goes wrong, there's almost an automatic alarm for that. But noticing what went right? That reflex rarely comes built in. Almost everyone agrees that appreciation matters, and yet almost nobody gets around to actually doing it. If that sounds familiar, you're not alone, it's less about caring too little and more about never quite building the habit.



Adam Grant and Francesca Gino looked into what a simple thank-you does to people. Those who received genuine gratitude weren't just more willing to help again, they were more likely to go out of their way for someone completely different later on. It wasn't a sudden mood boost or a sense of obligation driving that. It was simply the feeling of being seen, and knowing their effort had mattered to someone.

That's a useful thing to know, because it tells you how to phrase appreciation so it lands. A quick "thanks" doesn't do much on its own. But "thank you, that genuinely unblocked my afternoon" tends to stay with someone.

A few things that seem to help the most:

SOME TIPS

1. **Name the specific thing they did.** Instead of "you're amazing," try "thank you for staying late to reorder that enzyme on Tuesday", it's more concrete, and somehow more touching.
2. **Name what it made possible.** Telling someone what their effort changed for you or the project is often the part that means the most.
3. **Say it to them directly.** Praise shared behind someone's back, even kindly meant, doesn't quite reach them the same way. Say it to their face or write it to them.
4. **Say it close to the moment.** A note sent a couple of hours later feels warm and genuine. The same words a month later can feel more like an obligatory review.

Appreciation tends to come back around to the person giving it, too. Research by Emmons and McCullough found that people who regularly wrote down what they were grateful for felt noticeably better than those who kept a list of daily hassles instead. Gratitude seems to be good for everyone involved.

One thing worth sitting with gently: in our own (informal, small-scale) survey, women reported feeling less recognized than their teammates, even in teams where they made up the majority, and even while doing the same amount of work. This almost certainly wasn't anyone's intention, nobody on those teams decided to withhold appreciation from specific people. It's more that without a shared, intentional habit of acknowledging each other, praise tends to follow old patterns without anyone quite noticing. That's worth being a little more mindful of together.

In iGEM: synthetic biology involves a lot of troubleshooting, and it's easy for morale to slip into feeling like nothing is working. A successful transformation, or a tidied-up wiki page, is genuinely worth celebrating. Pausing to name these small wins helps make sure all those quiet lab hours don't just disappear unnoticed.

> **Go deeper:** *Grant, A. M., & Gino, F. (2010). A little thanks goes a long way. Journal of Personality and Social Psychology, 98(6), 946–955. · Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens. Journal of Personality and Social Psychology, 84(2), 377–389.*

> **A WORD OF CAUTION**
>
> Try not to let appreciation turn into a box to check. When it becomes a routine line on an agenda, it can start to sound hollow, and people usually notice. A little gratitude that feels genuine will always go further than a lot that doesn't, so it's okay to start small, as long as it's real.

One last thing

This booklet is a collection of what we learned, what helped us, and what we wish someone had told us earlier. It's far from complete, and it's not meant to be: we're students, not experts, and we only wrote down what made sense to us after reading, trying, and talking a lot about it. We didn't manage to live up to every rule in here ourselves, and that's okay. We still believe a team that actually sticks to these kinds of agreements could work really, really well together.

The one thing we'd want you to take with you: talk to your team early and write down how you want to work together. It doesn't have to look like our suggestions. It just has to be yours.

> **IF YOU ONLY DO 3 THINGS**
>
> 1. Agree on your communication rules and your unwritten expectations early.
> 2. Create a place where tensions can be named and picked up.
> 3. Look at it all again at the midpoint of your season.

We hope this booklet makes your season a little easier than ours was. That's kind of the whole idea behind iGEM anyway, isn't it? Leaving things a bit better for the team that comes after you… Which is exactly what we tried to programme into the core of ENCORE :)

Glossary

Autonomy, Competence, Relatedness (SDT) – The three psychological basic needs in Self-Determination Theory (Deci & Ryan), whose satisfaction supports intrinsic motivation.

Belbin Team Roles – Nine distinct behavioral patterns people tend to take on in teams, e.g., Implementer, Teamworker, or Plant.

Declared Load Limit – The conscious, spoken-out-loud limit of how much work or strain a person can currently carry.

Emotional Agility – The ability to engage with difficult feelings deliberately, rather than suppressing them or being steered by them.

Golden Circle – Simon Sinek's Why–How–What model, describing how purpose (Why) creates motivation and belonging.

Basic Forms of Anxiety – Riemann's four personality tendencies (schizoid, depressive, obsessive, hysterical), describing how people relate to closeness, distance, change, and permanence.

Ikigai – A four-part diagram (what you love, what you're good at, what the world needs, what you can be paid for) used to visualize meaning; a modern Western adaptation, not an ancient Japanese teaching.

Johari Window – A model of self- and other-perception with four areas (open, blind, hidden, unknown), showing how feedback and self-disclosure expand transparency.

Klärungshilfe (Mediated Clarification) – Thomann and Schulz von Thun's practical method for resolving entrenched team conflicts through facilitated dialogue.

Contact Boundaries (Minuchin) – The permeability between people or subsystems: rigid (too little exchange), merged/enmeshed (too much blending), or flexible (the healthy middle ground).

Contact Styles (Perls et al.) – Six typical patterns of how people avoid or shape contact, e.g., introjection, projection, or confluence.

Leadership Fan – A House of Competence teaching model with eight leadership styles, distinguishing task-oriented from people-oriented leadership.

Psychological Safety – The shared belief within a team that it's safe to take risks, admit mistakes, or ask questions without fear of embarrassment (Edmondson).

Psychological Contract – The unspoken, mutual expectations between a person and their team or organization (Rousseau).

Tension-Based Working – A Holacracy-inspired practice, adapted for teams, of clarifying a mismatch ("tension") before bringing it to the group (sharing info/gathering info).

Tuckman's Stages of Team Development – Forming, Storming, Norming, Performing (and later Adjourning): the typical, not necessarily linear, phases teams move through.

Team Performance Model (Drexler/Sibbet) – A phase model describing team development across seven stages, from orientation to renewal.

Transactional vs. Transformational Leadership (Burns/Bass) – The academic distinction between leadership through exchange/reward versus leadership through shared vision and inspiration.

WOOP – Oettingen's method of Wish, Outcome, Obstacle, Plan, combining positive thinking with concrete obstacle planning (if-then plans).

Bibliography

Belbin, R. M. (2010). *Team roles at work* (2nd ed.). Butterworth-Heinemann.

Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18*(1), 105–115.

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology / Psychologie canadienne, 49*(3), 182–185.

Drexler, A., Sibbet, D., & Grinaker, R. (n.d.). *The Drexler/Sibbet team performance model*. The Grove Consultants International. Retrieved October 15, 2026, from https://www.grove.com/portfolio-item/team-performance-model/

Edmondson, A. (1996). Learning from mistakes is easier said than done: Group and organizational influences on the detection and correction of human error. *The Journal of Applied Behavioral Science, 32*(1), 5–28.

Edmondson, A. C. (2018). *The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth*. Wiley.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*(2), 377–389.

Gersick, C. J. G. (1988). Time and transition in work teams: Toward a new model of group development. *Academy of Management Journal, 31*(1), 9–41.

Gollwitzer, P. M., & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology, 38*, 69–119.

Grant, A. M., & Gino, F. (2010). A little thanks goes a long way: Explaining why gratitude expressions motivate prosocial behavior. *Journal of Personality and Social Psychology, 98*(6), 946–955.

Herzberg, F. (1968). One more time: How do you motivate employees? *Harvard Business Review, 46*(1), 53–62.

Luft, J., & Ingham, H. (1955). *The Johari window, a graphic model of interpersonal awareness*. Proceedings of the Western Training Laboratory in Group Development. UCLA.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370–396.

Minuchin, S. (1974). *Families and family therapy*. Harvard University Press.

Oettingen, G. (2014). *Rethinking positive thinking: Inside the new science of motivation*. Current.

Perls, F., Hefferline, R., & Goodman, P. (1951). *Gestalt therapy: Excitement and growth in the human personality*. Julian Press.

Reiss, S. (2000). *Who am I? The 16 basic desires that motivate our actions and define our personalities*. Tarcher/Putnam.

Riemann, F. (1961). *Grundformen der Angst*. Ernst Reinhardt Verlag.

Rousseau, D. M. (1995). *Psychological contracts in organizations: Understanding written and unwritten agreements*. Sage Publications.

Sinek, S. (2009). *Start with why: How great leaders inspire everyone to take action*. Portfolio.

Sonnentag, S., & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model as an integrative framework. *Journal of Organizational Behavior, 36*(S1), S72–S103.

Thomann, C., & Schulz von Thun, F. (1988). *Klärungshilfe: Handbuch für Therapeuten, Gutachter und Firmenberater bei Teamkonflikten*. Rowohlt.

Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin, 63*(6), 384–399.

David, S. (2016). *Emotional agility: Get unstuck, embrace change, and thrive in work and life*. Avery.

Watzlawick, P., Beavin, J. H., & Jackson, D. D. (1967). *Pragmatics of human communication: A study of interactional patterns, pathologies, and paradoxes*. W. W. Norton & Company.

Winn, M. (2014, July 1). *The Ikigai Venn diagram* [Blog post]. View from the Cave. https://view.cv/ikigai

Zbinden, M. (2022). *Menschlichkeit in der Führung*. Springer. https://doi.org/10.1007/978-3-662-64896-4