

Team Project

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$ echo "Data Sciences Institute"
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Yesterday

1. Team Project guidelines
2. Developing a project idea
3. Git review

Goal

Develop a program that uses data creatively to solve a problem or provide insights that have a positive business impact.

Learning Outcomes

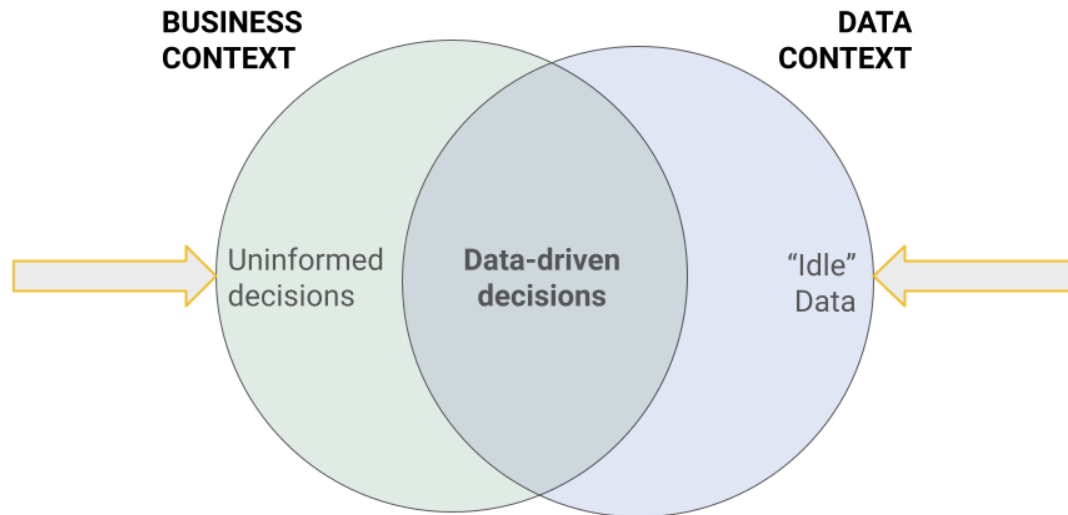
1. Resolve merge conflicts.
2. Describe common problems or challenges a team encounters when working collaboratively using Git and GitHub.
3. Create a program to analyze a dataset with contributions from multiple team members.

See **Team Project Part 1** for requirements.

Developing a project idea

How can we get the most value out of our data, and use it to better inform business decisions?

- We want these contexts to overlap!



Developing a project plan

1. Understand the business context.
2. Identify an opportunity.
3. Develop your analysis.
4. Present your results.

Developing a project plan

Check: are your insights actionable?

Check: how robust is your analysis?

Check: what are the caveats or unknowns?

See repository for detailed requirements.

Today

1. Rules of engagement and strategies for effective teamwork
2. Presenting your work and sharing it with others

Think about: how did yesterday go?

Do you think your team functioned well?

What could be improved?

Would the others on your team agree with you?

Rules of engagement

- Every time will land on slight different rules of engagement!
- The key is to be aware of what works and what doesn't, and adjust accordingly.

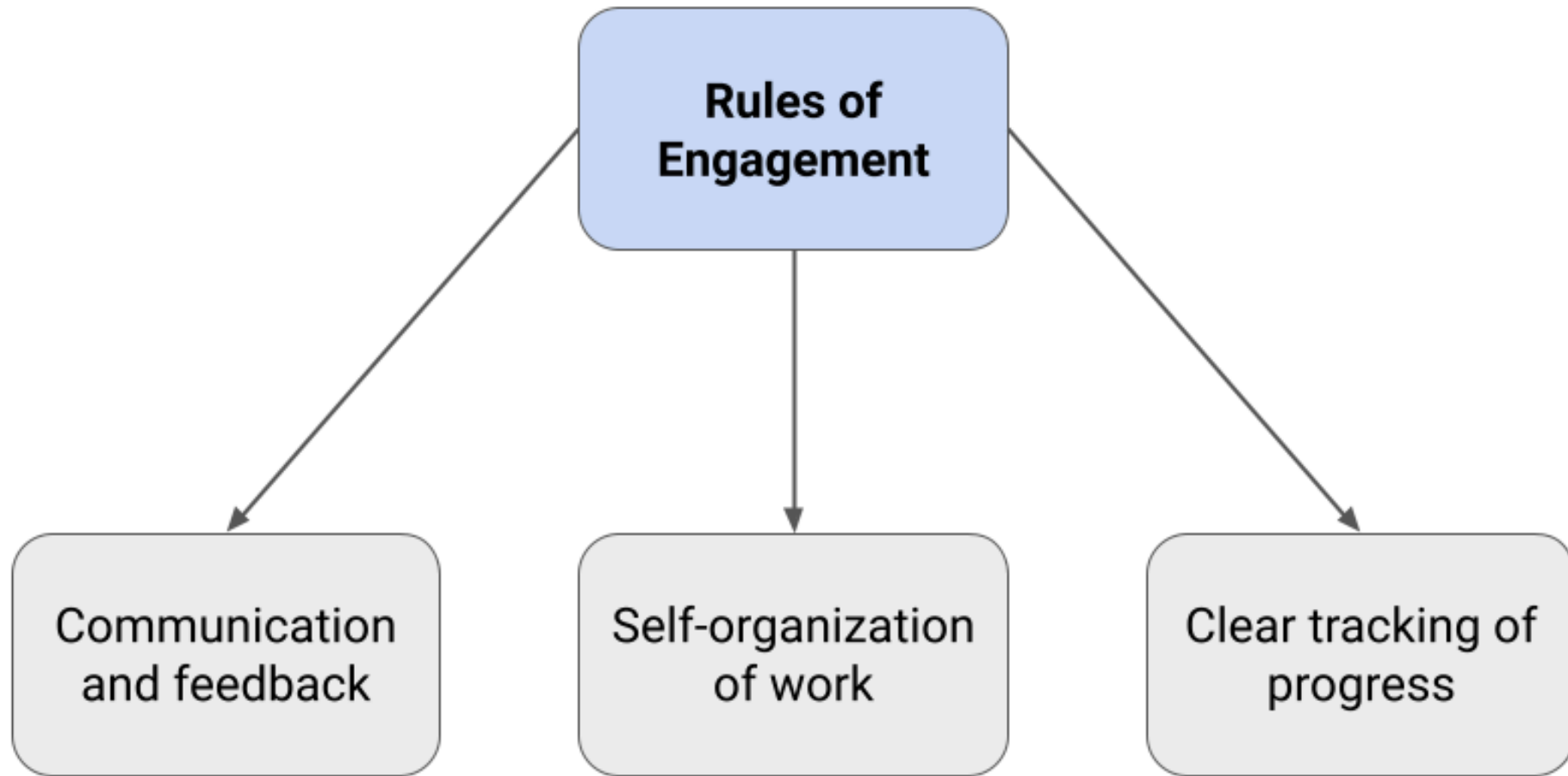
Rules of engagement

- However, **rules must be explicit.**
- Miscommunication happens when rules are left up to individual interpretation.

Rules of engagement

Successful teams:

1. Have strong communication.
2. Have a clear understanding of everyone's role on the team.
3. Work collaboratively towards a common goal.



Communication and feedback

1. **Feedback as a habit.** A feedback framework helps teams focus on improving processes instead of laying blame.
2. **Respectful and honest communication.**

A self-organizing team

1. **Clear accountability and ownership of tasks.** Every action item should have someone assigned. Of course, the assigned person can change if workloads become unbalanced.
2. **Be solution-oriented.** Instead of only presenting problems, try to always suggest a possible solution along with a problem.

Clear tracking of progress

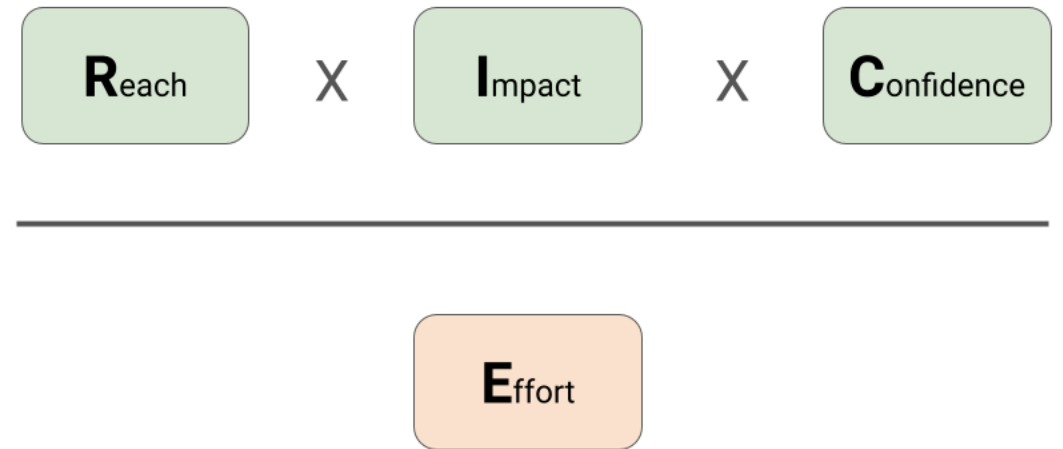
1. **Detailed tracking of roadblocks.** It is just as important to communicate roadblocks and failures as successes. The faster problems are identified, the faster they can be addressed.
2. **Use software and/or documentation to help track tasks.**

Prioritization

Many different frameworks exist.

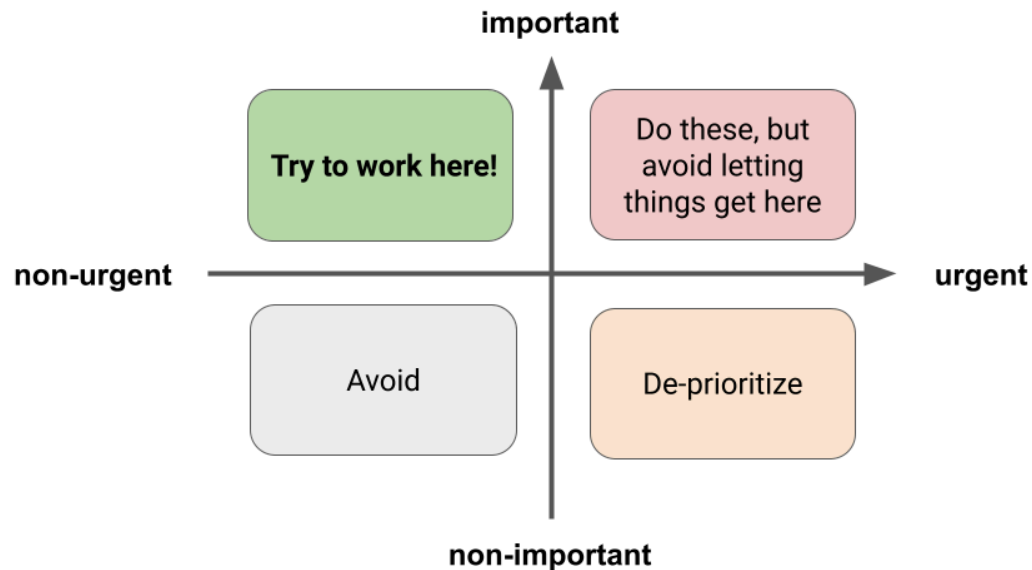
The **RICE** prioritization framework is an example, in which we try to quantify the:

1. Reach of a project (how many people it will affect).
2. The impact that it will have.
3. The confidence that we have in our ability to deliver.
4. The effort that it will take.



Prioritization

It is important to limit unimportant "busy work"; we want to be working on projects that will deliver the most long-term value.



Presenting your work

1. Understand your target audience

- What knowledge do they have about your project?
- Provide the necessary context.
- Reinforce the insights that **they** can act on.

1. Understand your target audience

Example: We are presenting our analysis of office space usage to the department heads who assign seating. They are not technical, but understand the problem and are looking for a solution. Furthermore, they have their own prior perspectives on office space utilization.

2. Clearly articulate the takeaways

- Make sure your audience understands the most important information.
- Don't add unnecessary detail, but be prepared to speak in depth if asked.

2. Clearly articulate the takeaways

Tips for Amazon Writers:

1. Make sentences clear and concise (less than 30 words).
 - "Due to the fact that..." -> "because".
2. Replace adjectives with data.
 - "We improved performance" -> "we reduced latency from 10ms to 1ms."
3. Eliminate weasel words.
 - "Nearly all customers." -> "87% of Amazon Prime members."
4. Reply to questions with one of four "Amazon answers":
 - Yes / No / a number / I don't know (and will follow up when I do)

2. Clearly articulate the takeaways

Example: Our company could reduce real estate overhead, while maintaining productivity and employee comfort, if we removed the assigned seating for 10% of teams but updated 25% of our office space to be flexible seating.

3. Highlight the value added

- Quantify as much as possible.
- Indicate how your work improves over previous work or the status quo.

3. Highlight the value added

Example: Updating the office spaces would add 5% to our real estate costs over the next year, but would save 10% per year once the new seating is implemented.