

Using "The Matrix" to shape distributed research teams

The Crow team prioritizes mentoring and long-term professional development for all of our researchers. We want to compensate all team members for all of their work, but realize the reality of funding in writing research makes that impossible. So we seek other ways to ensure Crow researchers find their contributions to our project are rewarding for them in the long term. We codify this in two of the six best practices that we call "Constructive distributed work:"

- Help team members establish cohesive professional identities as they shift between roles and tasks.
- Prioritize individual learning even when new skills and competencies don't directly benefit the team.

We use a tool called "The Matrix" to help us achieve these two goals. This explainer is intended to help teams develop their own versions of The Matrix. For more about the theoretical grounding of this tool, see our article "Constructive distributed work" by McMullin and Dilger in the *Journal of Business & Technical Communication 35*. Please ask for a preprint if you don't have access to this journal.

Step one: Create a shared document

Create a version of The Matrix using a document accessible to your whole team. We use Google Docs, and have created <u>an annotated template you can copy and modify as you see fit.</u> This template includes both how-to content and examples from the Crow team.

We use the same document over time, adding new Matrices to the top of the document as we go. That way everyone can refer to the past easily and there aren't multiple documents to track.

We've developed the columns that make up The Matrix over time. Please see the example for annotations describing each column. **Most important: it's not just Crow work that we track.** We Crow researchers about outside goals and interests and encourage team members to see ways they can be complementary. The information that we track is adaptable and can change over time, based on the needs of our team members.

Using a shared document can help onboard new team members and create opportunities for horizontal mentoring: people new to the project can learn from others, and project leads can look to the interests of team members to recruit help for their projects. The shared document also allows team members to see the different work that is happening across the project.

Step two: Ask team members to describe their work periodically

Most of our institutions are on the semester system, so we ask team members to complete The Matrix at the start of each semester (Fall, Spring, and Summer). We usually ask for this to happen about a week before each semester begins, so we can have most assignments finalized by the end of the first week of the term.

Everyone on the team—students, faculty, postdocs, consultants—adds their name to The Matrix and fills in all of the columns based on their current responsibilities, their goals for Crow-related work, and their goals for professional development, broadly speaking. We occasionally use links to our team communication platform and other shared documents in The Matrix, but prefer to keep things self-contained.

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Current columns in The Matrix

- Graduation date (if applicable)
- Current Crow projects
- Crow profile (Where's your expertise?)
- Publications in process (Crow + otherwise)
- Current independent projects
- Project interests or needed skill building
- Current semester workload (teaching, admin, service)

We encourage conversation about The Matrix by creating a space in our team communication platform dedicated to answering questions anyone has about their work—especially new folks or those at important transition stages of their careers (e.g. beginning a new job, admission to candidacy in a doctoral program). It's quite common for more experienced student researchers to help those less experienced reflect on their decision-making.

Step three: Review The Matrix and make individual and team-level changes

As team members fill in their lines on The Matrix, project leaders review the information and consult with each other as needed. Then PIs host brief conversations with individual Crow researchers. This work takes place using both face-to-face meetings (over video, given our current situation) and through chats on our team communication platform. There are four essential elements to this review:

- 1. **Ensuring focus and preventing overwork.** Team leaders discuss individuals' workload with them, offer suggestions about focus, and highlight opportunities to cultivate matches between internal and external work. It's very important to avoid overwork; better for individuals to run out of things to do than have too much.
- 2. **Making professional growth visible.** Individuals' Matrix lines provide an important method for understanding how their contributions to the project help Crow and their other work as well. Reading across each line, then comparing with Matrix lines from previous semesters, can help team members see their professional growth over time.
- 3. **Balancing leadership responsibility and opportunity.** Crow PIs use The Matrix to influence who leads projects over time. Rotation of leadership among team members is a key strategy for helping Crow researchers develop leadership skills without overwork.
- 4. **Shaping overall project direction.** Team members can influence the overall direction of the project in a structured fashion by suggesting new projects or shifting the focus of their work. Both PIs and team members keen on starting new projects can do so by suggesting them as we fill in and review The Matrix. Making knowledge about existing expertise visible can facilitate scaffolding upon existing work, forming new projects, and finding new team leads. In this manner, The Matrix supports our goals for sustainability, ethical leadership, and long-term growth of both the project and team members' expertise.

Conversations about The Matrix among leadership have contributed to its evolution over time, and we suggest that you take the same approach: modify the information you ask about, and the ways you use it, based on conversations across your team. Make The Matrix work for your team's specific needs.

We would love to hear your feedback about this explainer and other materials we've shared on the Crow web site. Write to collaborate@writecrow.org or use the feedback form on our website.

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