# Individual Development Plan

OVERVIEW

*This document is a modified version of* [*this blog*](https://ecoevoevoeco.blogspot.com/2021/12/individual-development-plans.html) *post by Hendry, Bolnick, Gotanda, and others. It is intended as a structured reflection, primarily to help you, but also to help your supervisor support you as much as possible. You should take time to reflect on each question and save your answers so that you can revisit them every few months. It might help to use a ‘chatbot’ to help you explore these questions, and to help you find relevant information (e.g., areas of literature, professional societies, conferences, professional development strategies). You should treat this as a living document that you can revisit every few months to help guide your project, track your process, celebrate your successes, and identify challenges or barriers that are impeding your progress. If there are questions that you are not comfortable discussing, it is suggested that you still complete what you can, but then save an alternate version for your supervisor with those parts excluded. Note that the space provided after each question is not intended to be limiting – add lines as needed to fit your thoughts.*

**Name:**  **Position:**

**Start Date: Anticipated End Date:**

**Date:**

**Reviewed and discussed with:** *<mentor name>* **on** *<date>*

**Trainee signature:**

**Mentor signature:**

CAREER GOALS

1. *What motivates you to do this project? Reflect on your values, interests*.
2. *What type of job do you aspire to have in 5-10 years?  Why? What do you find rewarding about this choice?*
3. *What do you see as an alternative job path, if you have any in mind? What situations might move you to adopt this alternate path?*
4. *As far as research, what long-term scientific outcomes do you wish to achieve in your career (if any)?*
5. *What skills / knowledge / products has your previous training and work given you that help you towards achieving goal (1) or (2)?*
6. *What do you see as the primary challenges that could limit your ability to complete your project and achieve your career aspirations?*

HEALTH AND WELLNESS

1. *What are your values and ‘non-negotiables’ for your future career? (e.g., restrictions due to family, health, accommodation needs, location, work hours, religious or moral values)*.
2. *What do you do to maintain a healthy work-life balance, to reduce the risk of burnout? You should reflect on strategies and activities to help maintain personal physical and mental health, and healthy relationships with friends, partners, family, and colleagues.*

SKILLS AND GOALS

*For each of the following points, reflect on your current strengths and what could be improved. What skills do think you should develop? The following may include coursework or other forms of training.*

1. *Discipline-specific conceptual knowledge (e.g., literature reading). What fields are you most familiar with, and what fields / topics do you still need to master? We will use this to plan some reading assignments*.
2. *Laboratory skills*
3. *Field work skills*
4. *Computational biology skills*
5. *Statistical analysis*
6. *Graphical presentation of data*
7. *Writing manuscripts*
8. *Grant writing*
9. *Oral presentation & conference attendance. Have you given posters/talks at conferences? What was this experience like? What could be improved? What conferences do you feel you should be attending, and why?*
10. *Outreach and public engagement*
11. *Networking and professional development: what do you need to improve your academic network. Who should this network include, and why, and how will you connect with these people?*
12. *Teaching and mentoring*
13. *Leadership and project management*
14. *Responsible Conduct of Research:  Ethics, Animal Care, Data Archiving, Open Code, Permitting, etc.*
15. *Professional skills: Setting appropriate deadlines, being respectful of colleagues and shared spaces (e.g., clean labs, organized field sites), accommodating other’s needs, proofread emails and other communication*
16. *What are you doing to improve the social / cultural setting in which you work, including promoting Diversity Equity, Inclusivity and Indigeneity?*

PROJECT QUESTIONS

*Developing and refining a research project is a creative process that is not easily captured by a simple set of rules and procedures. It is completely normal to struggle with this, particularly at the early stages, before you have read the literature deeply enough to identify knowledge gaps and open questions. Start by digging into the research and work on these, ask for feedback from your peers, incorporate feedback, do some additional research, and repeat.*

* 1. **Guiding Questions**: What are the ‘big picture’ questions or problems that relate to your project ideas? *Guiding questions* are too broad to be answered by your project, but they position your project within the entire landscape of human knowledge. Ask yourself questions like: Why would a non-specialist care about my project? Which types of specialists would be interested in this research. Socio-economic problems like the biodiversity crisis or the impacts of invasive species are popular topics for big picture questions. It’s okay to include these, but try to also think about more specific questions based on observations about the natural world, like: What generates or maintains biodiversity? Why isn’t there just one (or a few species) that use all the available resources? Why do species have range limits? Why are some species thriving while others are declining?
	2. **Specific Questions and Aims**: Now try to drill down to more specific questions that you can address with your project. Maybe you won’t have a definitive answer, but you will at least have something relevant to the conversation. *Aims* are broad-level statements about the intention and direction of your project, and should be motivated by an open question or problem. Aims can help to frame your biological questions when you write up a project about your manuscript, and usually focus on a particular study system or dataset.
	3. **Specific Goals and Objectives**: For each *aim*, identify one or more *goals*, which define long-term target that you are working towards over the next few months or years. Then break down each *goal* into smaller, specific *objectives*. Your goals and objectives should be SMART:
* **S**pecific – are they clearly defined, unambiguous and focused?
* **M**easurable – what will determine if you are successful? (e.g., number of measurements, samples processed, data analyzed, models run)
* **A**chievable – are they realistic and attainable?
* **R**elevant – do objectives align with the larger goals? Do goals align with a specific aim or question?
* **T**ime-bound – how long will it take?
	1. **Timeline**: Use a Gantt chart to arrange your SMART goals and objectives into a timeline. It’s easy to do this in a spreadsheet by shrinking the column widths so that you have a grid layout. Determine the appropriate grid units (day, week, month) and highlight the number of cells corresponding to each SMART objective. Then think about the order based on priority and logic (e.g., you can’s sequence DNA that you haven’t extracted yet. For larger projects, it might help to first make a separate chart for each goal, then combine into a larger timeline with objectives grouped under subheadings for each goal.

ANTICIPATED CHALLENGES

1. Identify skills and knowledge that you will need to accomplish your goals and objectives. Highlight any that you think you will need to work on. What are your priorities for improvement, and how do you plan to achieve those improvements? These may include readings, professional development courses, etc. *Add these to your timeline*.
2. Are there specific courses or labs within or outside of the university that could provide training that is not available here? *Discuss with your supervisor and add them to your timeline*.
3. Are there journal or book reading clubs you could join (or initiate)?
4. Which courses do you plan / need to take?
	1. Who would be appropriate members to sit on your committee? What skills and expertise will they bring? If you are a PhD student, you may want to consider adding expertise from another department or university.
	2. Add committee meetings to your timeline. Once you do this, it becomes clear which goals and objectives to focus on for each committee report and your project proposal.