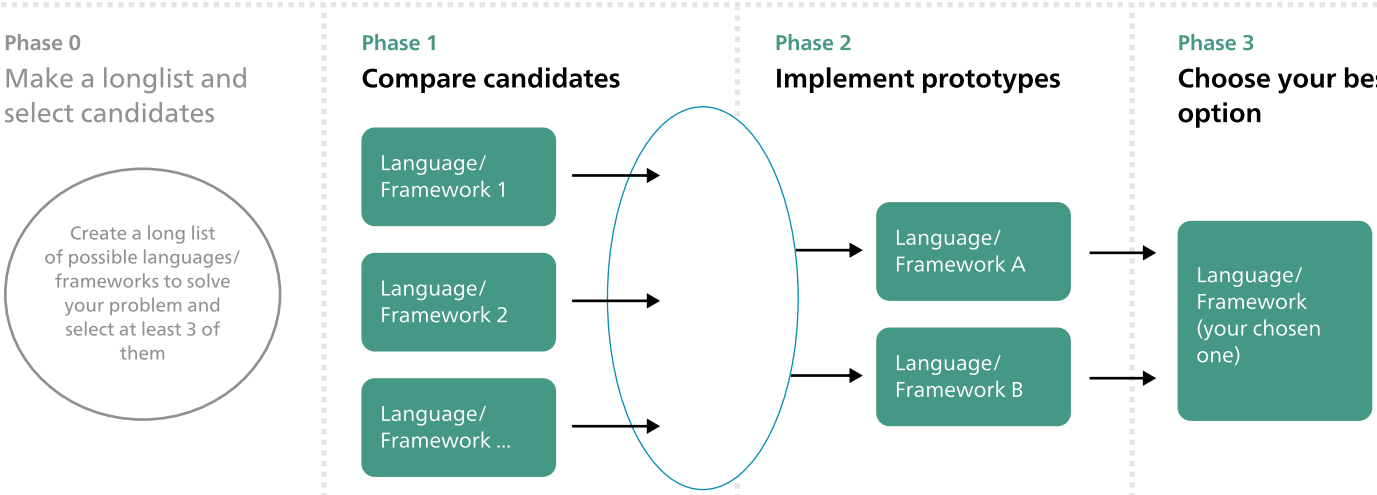
SAXION UNIVERSITY OF APPLIED SCIENCES

Advanced Application Development
Research Approach



Goal: compare each alternative in a structured way and decide which alternatives you want to use for rapid prototyping.

What to do: check the documentation, find tutorials, find user experiences and reviews and rank the alternatives based on your findings.

Goal: get real experience in the alternatives and check if the alternatives offer all the functionalities you need.

What to do: implement the same proof-of-concept prototype in the selected alternatives

Goal: choose the best option for your solution.

What to do: Reflect on both implementations and decide, based on your experiences and the requirements of the system you want to build, what the best solution is.

From research to result

We want to encourage you to explore new frameworks and languages during this specialisation. You'll do this using the research method in the above figure. Below, you can find the detailed explanation of each of the phases.

Phase 0
You start with finding all possible languages and frameworks for your project in phase 0, which results in a long list of options. Don't spend too much time on this, because you don't have to "grade" or "judge" the frameworks yet. Try to find at least five frameworks (or combinations of frameworks and languages). From this list of five, you'll pick at least three frameworks that you'll take into phase 1.

Phase 1
Compare all of the selected candidates in a structured and thorough way. A good approach is to rank each of the frameworks on a predefined set of criteria. But before you can do that it's good to think about the expectations you have on each criterium. So, do the following:

- Make a list of criteria where you want to rate the frameworks on. Think about items that you find important and that makes sense to you. Suggestions: installation, documentation, community, examples, extendibility with plugins and/or components, performance of the final product, product deployment, learning curve, ...
- Add your own criteria for the chosen advanced track. These criteria should carry a lot of weight in your research.
- Rate each framework on each of your own criteria. Put the criteria and rates in a table (the rows are the criteria, the columns the 3 alternatives and the cells the rating number).
- Rating is not only giving a number, mark or grade, but also justification about why.

Based on your research, you draw a preliminary conclusion and choose two of the frameworks which you want to proceed with, based on the criteria and their ratings.

Phase 2
Build a proof-of-concept prototype in both of your selected frameworks to make sure that everything you want in your final product is possible in these frameworks. You can come up with a case yourself, that fulfills the requirements for your advanced track, or use one of the predefined cases on Blackboard. If you use your own case, take a look at the minimum requirements on Blackboard.

Phase 3
Now you have two prototypes and experienced developing with both alternatives. Which one is better and why? Reflect on both prototypes and both frameworks and reason which one is the best and why. In the end, you're left with a conclusion of which framework suits your needs best.

You document this research in a well-structured report. This will be your submission for assignment 1 at the start of week 4.

After the research and prototyping phases, you will start using the chosen framework for assignment 2: design and build your own full stack application. You will submit this after week 8.