# VISUALIZING SURGICAL PROCEDURES DYNAMIC PROCESS FOR EXPLORING DATA

TimeTracker is a tool we use at Farm to help us visualize, explore and analyze procedural data. By turning quantitative data into visual information we are able to more effectively identify patterns, trends, and differences between surgical approaches.

Specifically, the TimeTracker is a visual information processing tool used to:

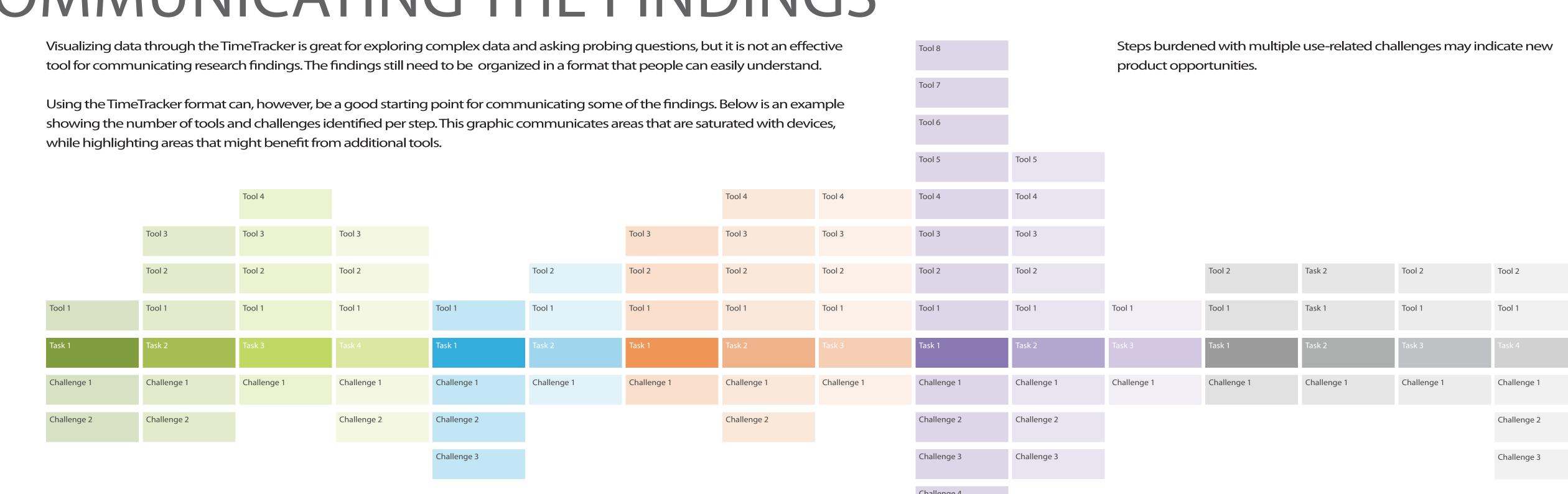
- Better understand the step-by-step process that surgeons go through;
- Compare approaches and philosophies among surgeons;
- Identify steps that are taking a long time to complete;
- Identify repeated steps and back-tracking;

opportunities.

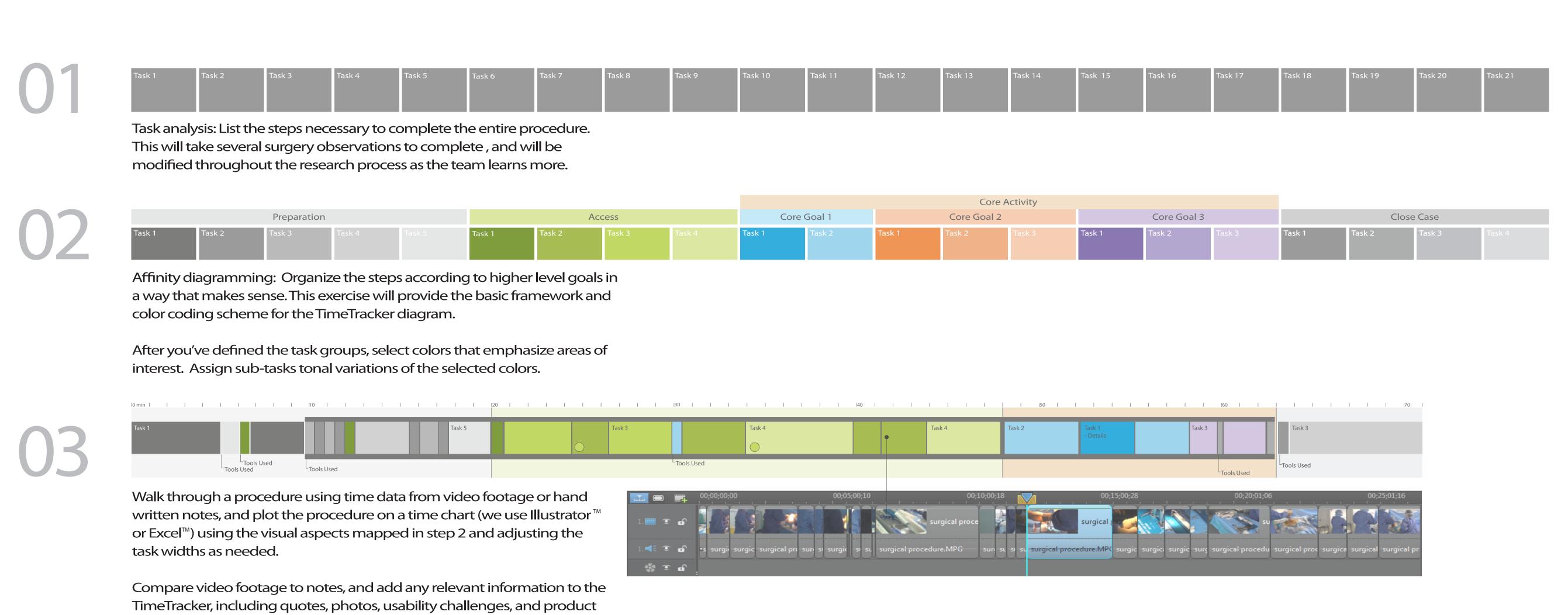
- Identify unmet needs and opportunities for improvement;
- Document tools used throughout the procedure;
- Document unmet needs and product opportunities within the context of the overall procedure.

- Visual attributes correspond to the procedural elements we're trying to understand.
- Color indicates the high level goals the surgeon is trying to achieve.
- Color tones represent specific tasks the surgeon conducts to achieve the goals.
- Horizontal length corresponds to time on task.
- Icons are used to highlight notes of interest e.g., specific steps in the procedure.
- Notes are used to capture rich details surgeon quotes, usability challenges, etc.
- Surgeon profiles are used to identify possible correlations between the data and the surgeons' demographics (e.g. geographic location, years of experience, education).

### COMMUNICATING THE FINDINGS



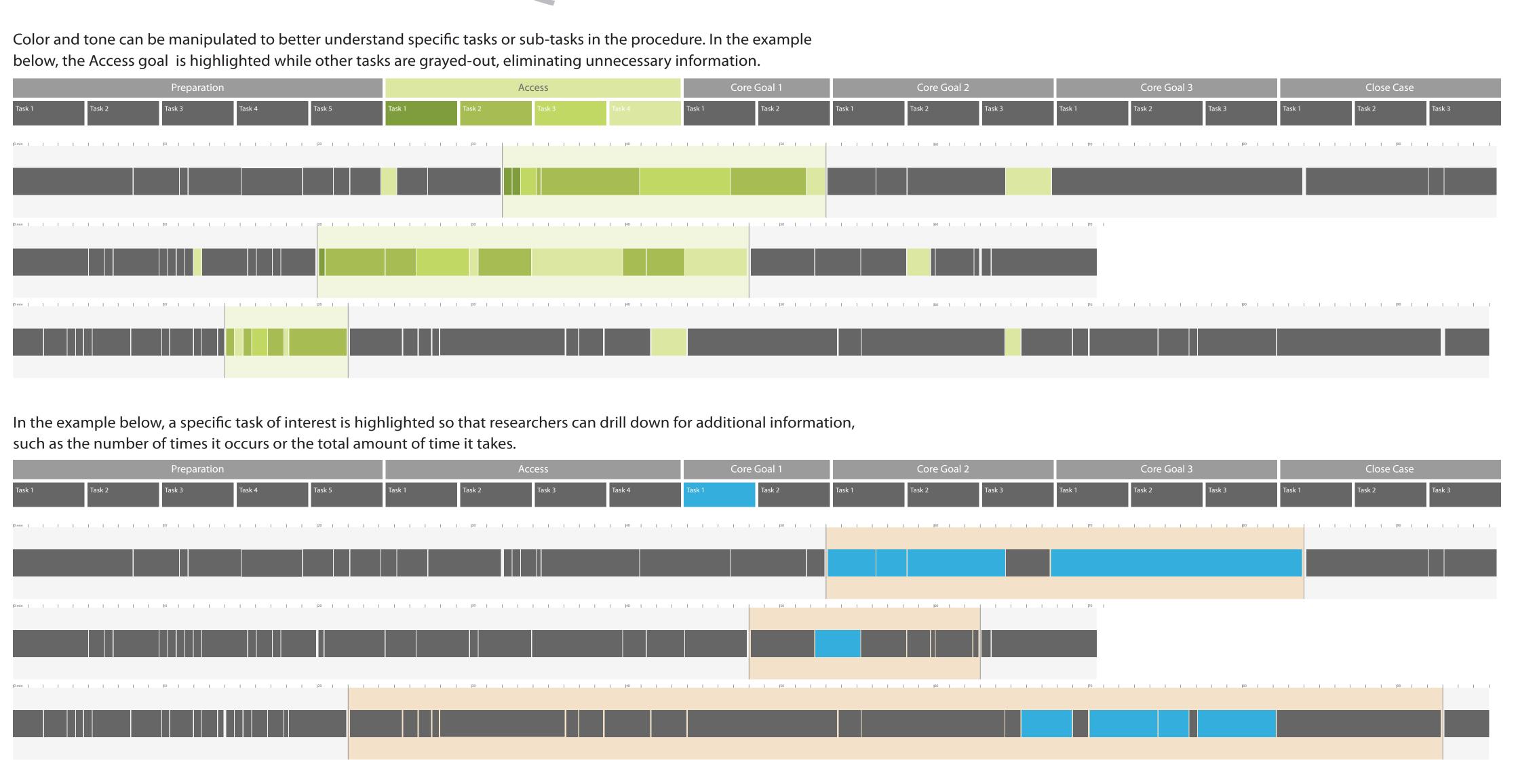
# PROCESS CREATING THE VISUAL DATA

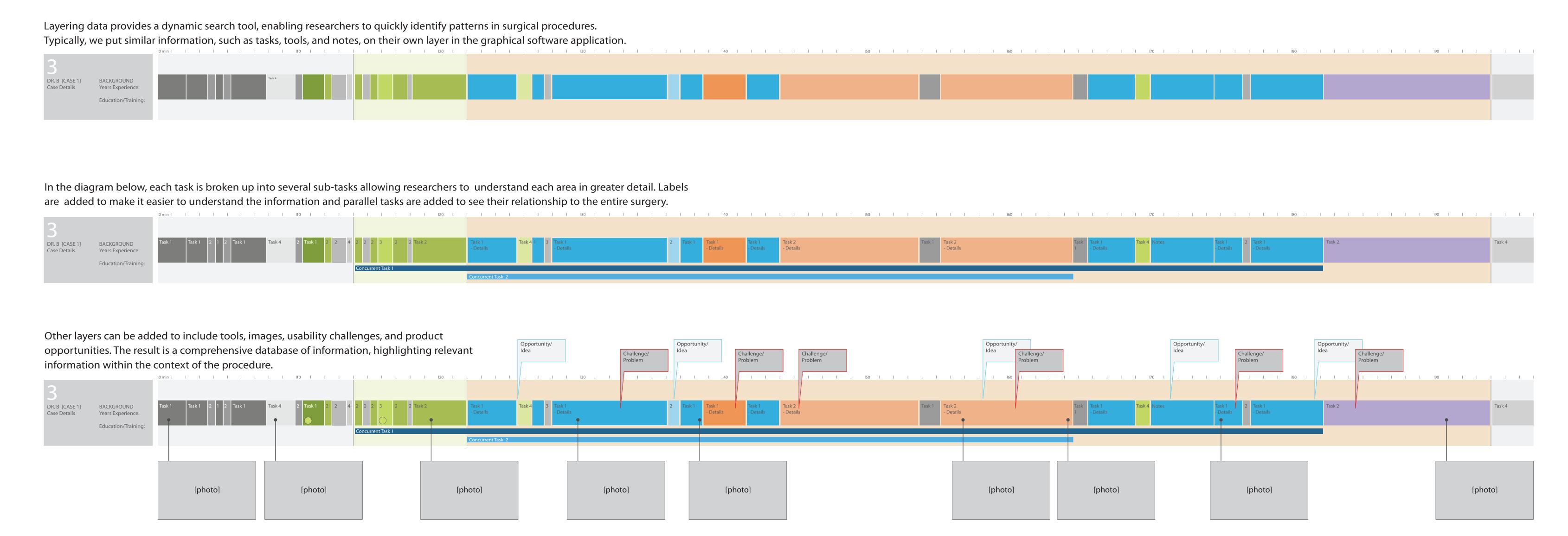


## SURGICAL PROCEDURE TIME TRACKER









CONTACT