Planning algorithm

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1 Problem space

The number of possible permutations of sub tasks within the sprints is

$$n = (n_{team} \cdot n_{sprint})^{\sum_{i=0}^{n_{task}} w_i}$$

where

- n - number of possible solutions
- n_{team} - number of teams
- n_{sprint} - number of sprints
- n_{task} - number of planned tasks
- w_i - work of given task

In our example we will get $n = (5 \cdot 11)^{280} = 1.6 \cdot 10^{687}$. For comparison - the estimated number of atoms in the known universe is around 10^{80}

Let's consider a more realistic example:

- 5.000 story points (50 projects 100 SP each)
- 16 sprints (a year)
- 6 teams

This will result in problem space $n = (6 \cdot 16)^{5000} = 2.2 \cdot 10^{9911}$. Looks like we are going to have to optimize a bit in order to be able to get some usable solution in reasonable time (smaller than few billion years).