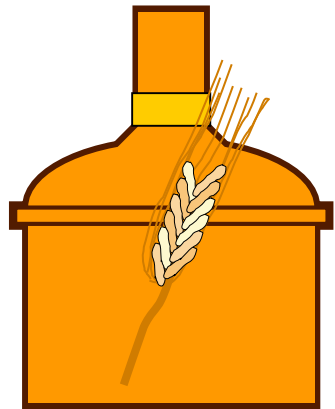


About beer brewing

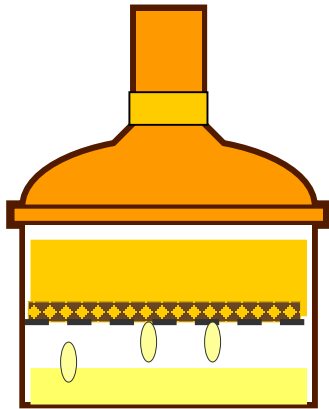
Beer brewing involves numerous steps and takes more than 1 month

The process of wort production

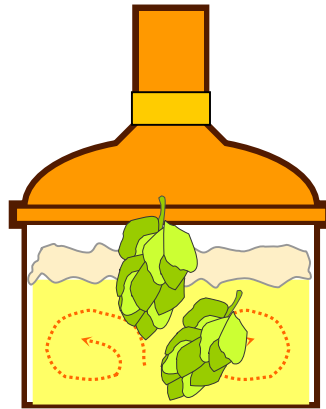
The process of beer production



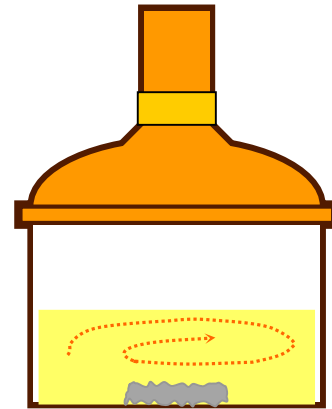
Mashing



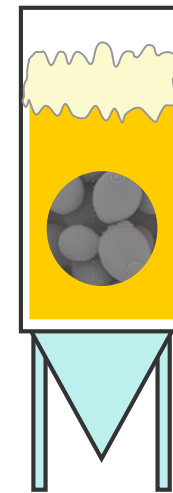
Lautering



Boiling



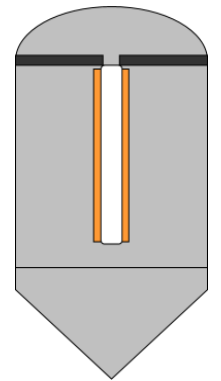
Clarification



Fermentation



Maturation



Filtration



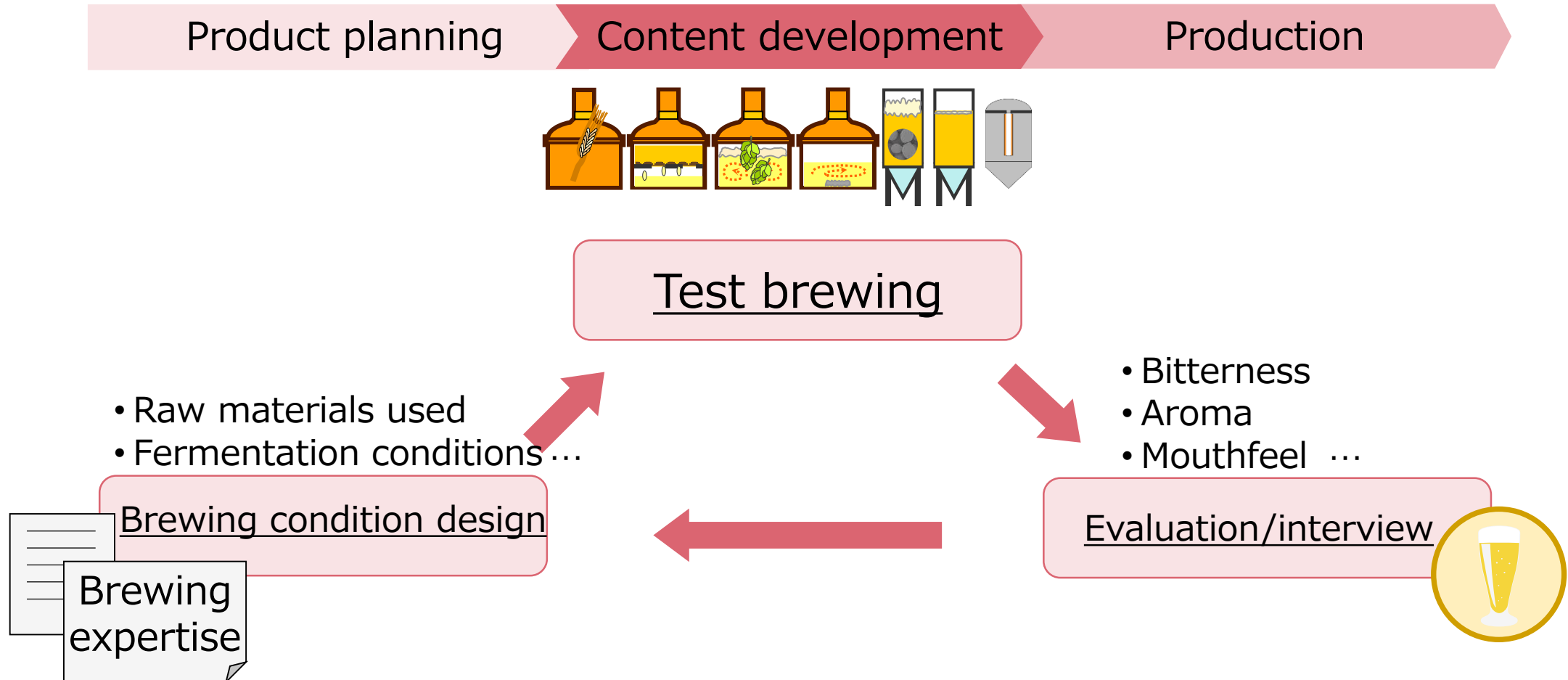
Half day



About 1 month

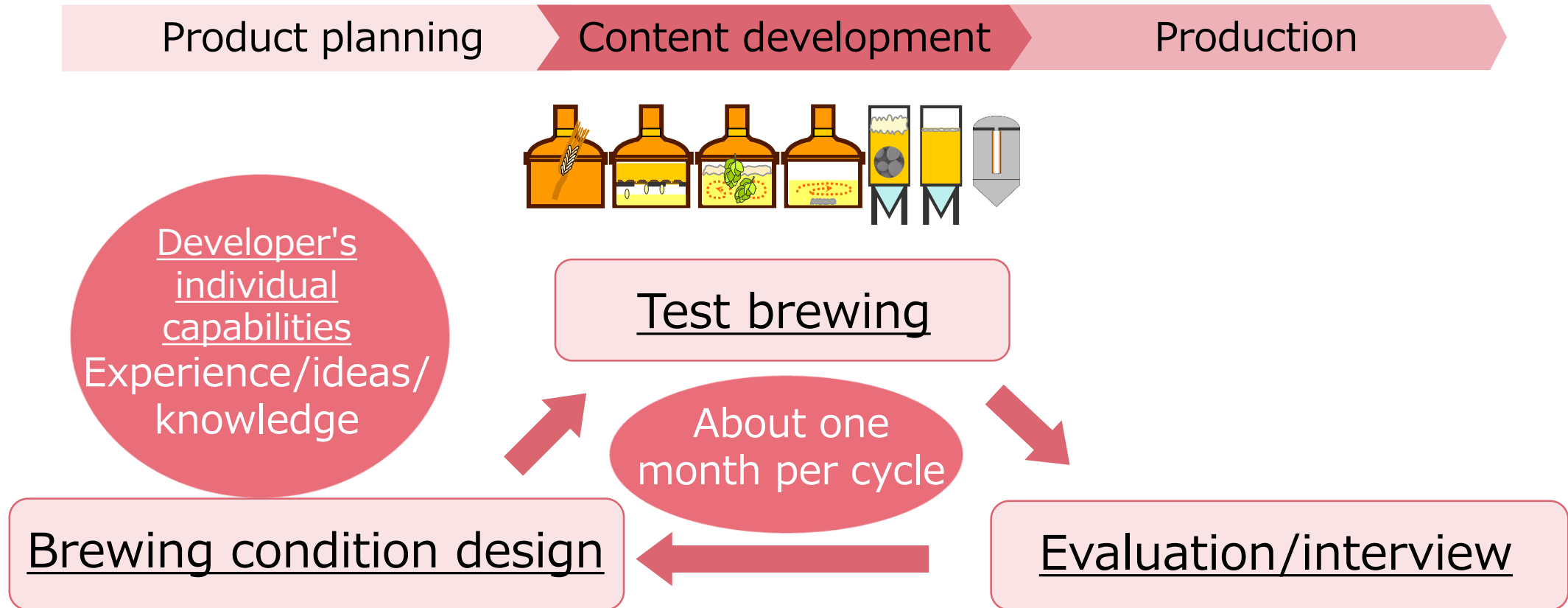
Challenges of beer product development

When developing a beer product, a process of trial and error is repeated that consists of designing brewing conditions to match the desired taste, carrying out test brews and evaluating the results



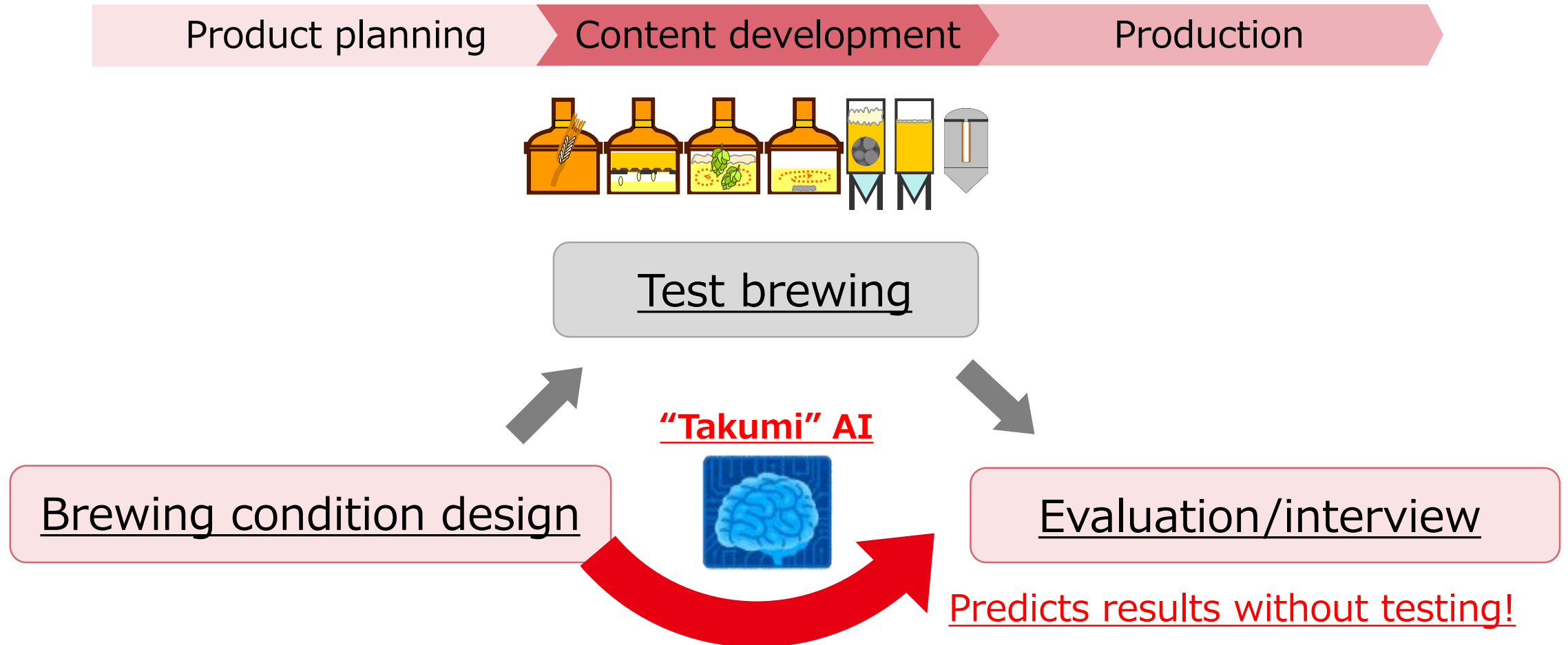
Challenges of beer product development

Repeating test brews multiple times over is a lengthy process, and design requires the developers' individual experience and intuition



About this technology “Takumi” AI

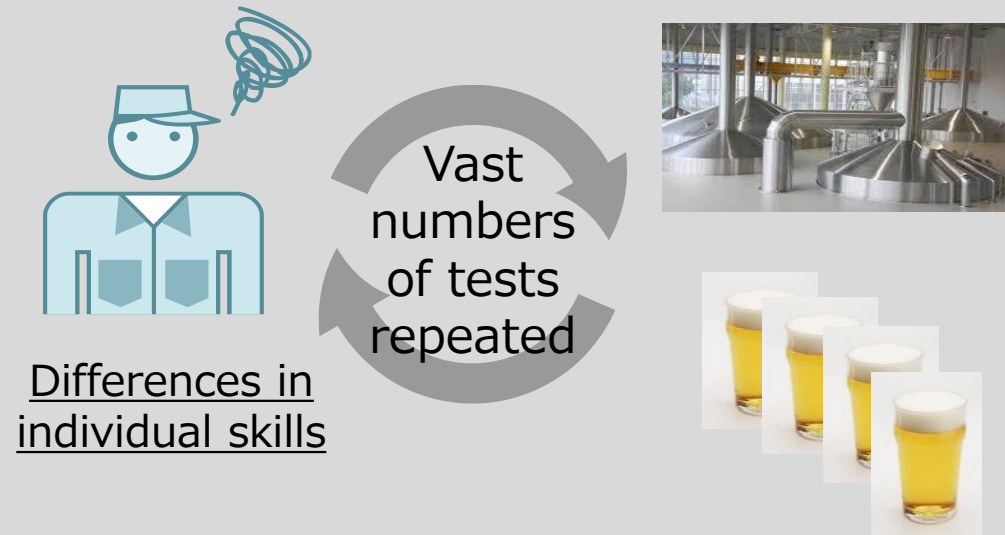
Developed an AI-based system that predicts test results in advance



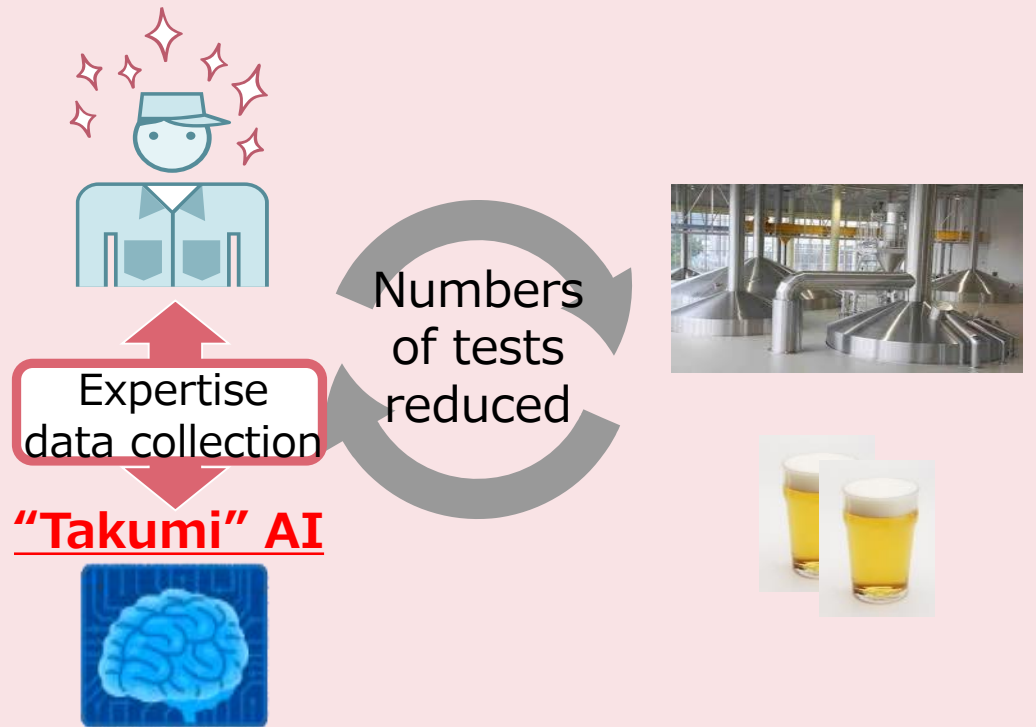
What can be expected with this technology

The combination of human and AI inputs will shorten development times while helping us gather highly accurate expertise data and pass on technologies in order to deal with increasingly diversified preferences promptly

Before (development by humans alone)



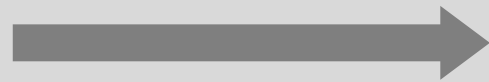
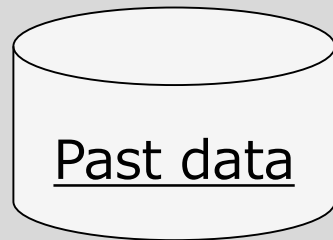
After (development involving cooperation and division of roles between humans and AI)



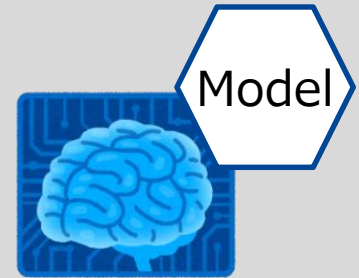
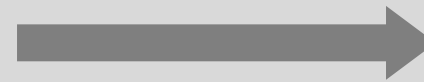
Features of this technology

We have created a highly accurate model by combining beer brewing expertise with data science, and have applied to have this patented

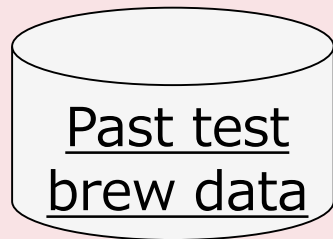
Simple machine learning



Machine
learning

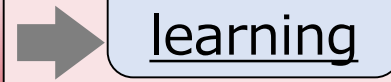
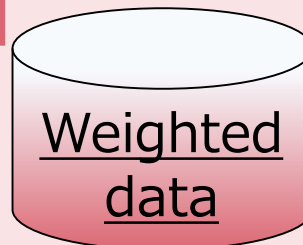


"Takumi" AI



Expertise
on raw
materials

Expertise on
fermentation



Machine
learning

