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From'Innov: an innovative cheese technology to obtain aroma in solubilized soft cheese

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Context

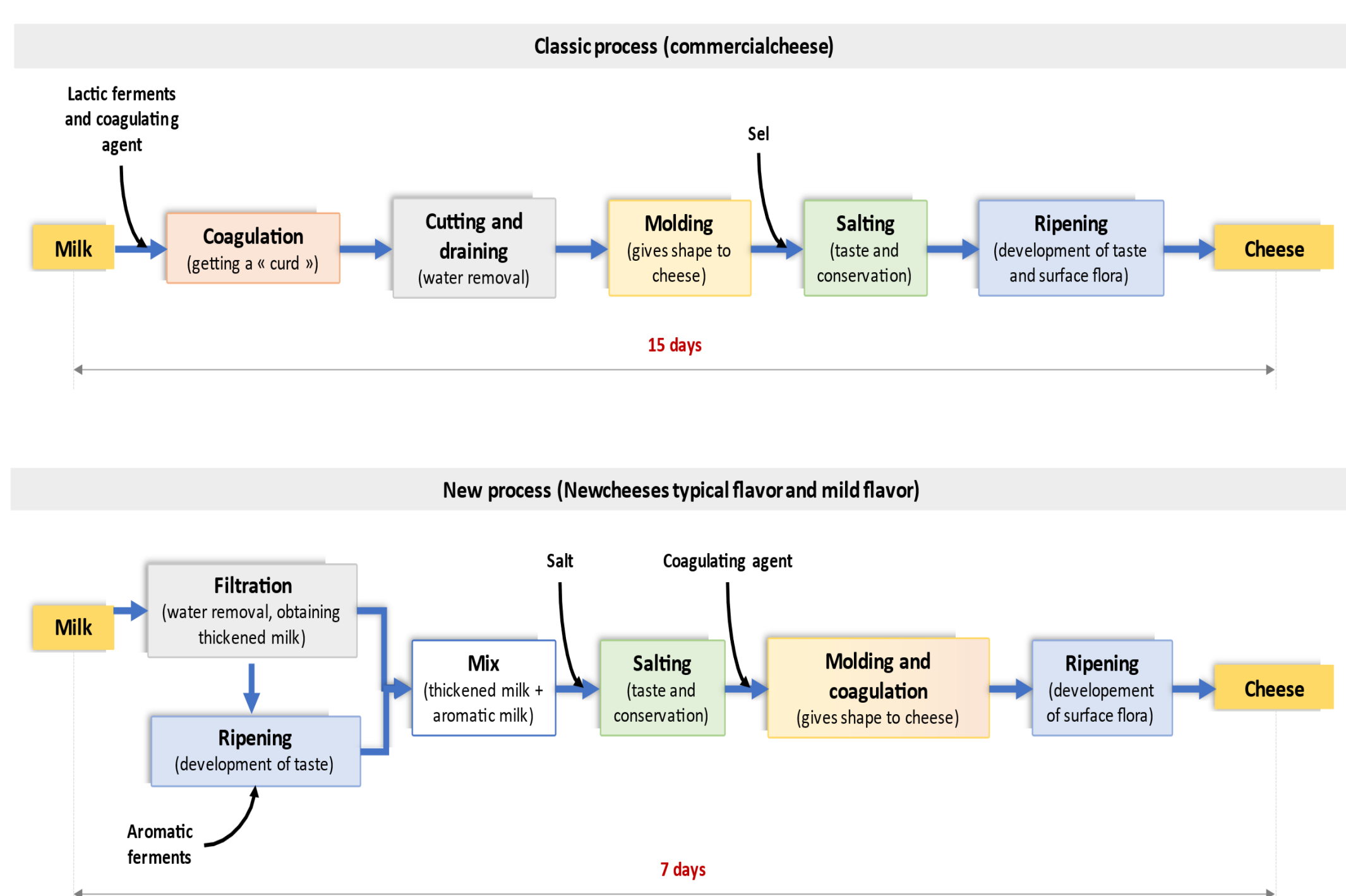
- Cheese-making technology has been around for a very long time.
- The evolutionary modernization of its processes has led to longer shelf-life. However, improvements are still possible at the aromatic level, especially for solubilized soft cheeses. These improvements could help adapt to changing consumer preferences.
- According to "L'économie laitière en chiffres - Editions 2022 - CNIEL - p.111, the French soft-cheese consumption, in volume, decreased slightly by -1,5% from 2017 to 2021.

Objective

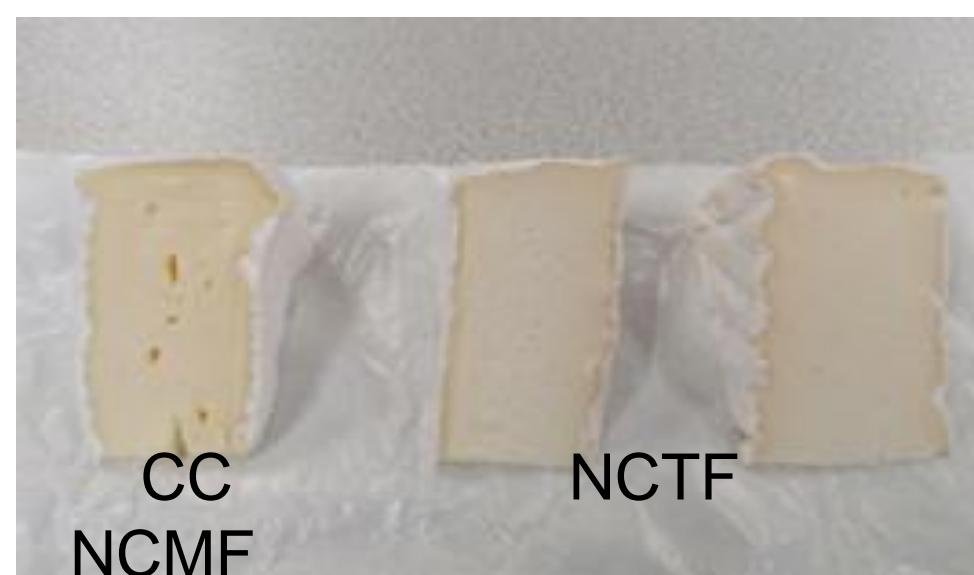
- **From'Innov** is an innovative process, breaking with traditional processes. Thanks to its flexibility, this new process is particularly well suited to meet the challenges associated with the development of cheeses whose properties are in line with consumer expectations.
- Determine whether solubilized soft cheeses made using **From'Innov** technology and with taste can be accepted by consumers.

Materials & methods

- Products : 3 solubilized soft cheeses : a commercial cheese (CC) obtained by a classic process and two experimental produced by **From'Innov** i.e. a new cheese with a typical flavor (NCTF) and a



Ingredients (% w/w)	NCTF	NCMF
Filtration retentat	90.5	95.2
Hafnia alvei	4.0	-
Y lipolytica	0.5	-
Aromatic NIZO	2.0	2.0
Surface flora	2 doses	2 doses
NaCl	1	1
Glucono Delta Lactone	2.0	1.8
Total	100	100



- Consumer test : 142 consumers, 3 cheeses above

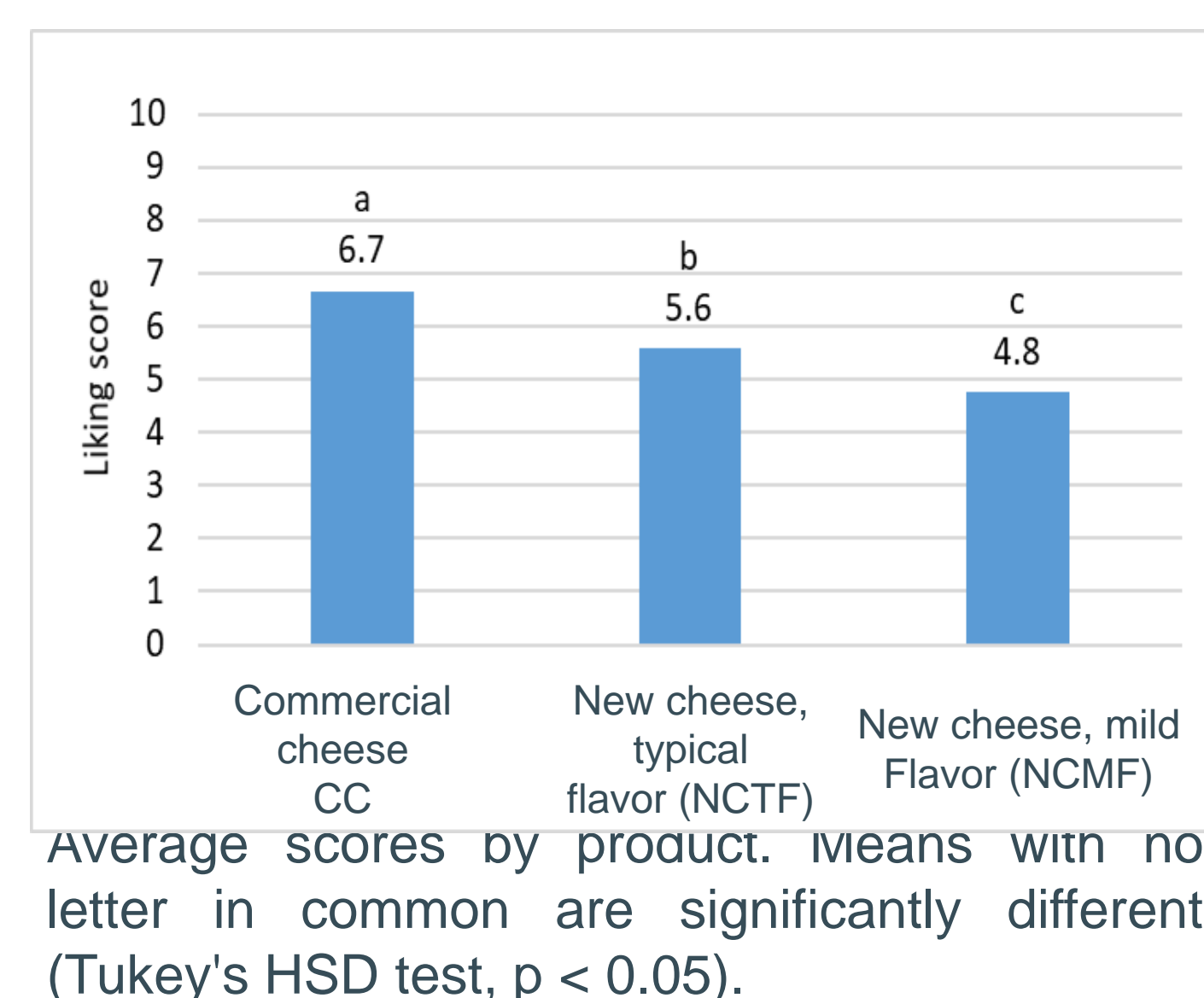
- Hedonic appreciation
 - Not enough at all
 - Not enough
 - Just about right
 - Too much
 - Far too much
- Penalty analysis : level of satisfaction with the intensity of nine sensory properties (Just About Right scale)



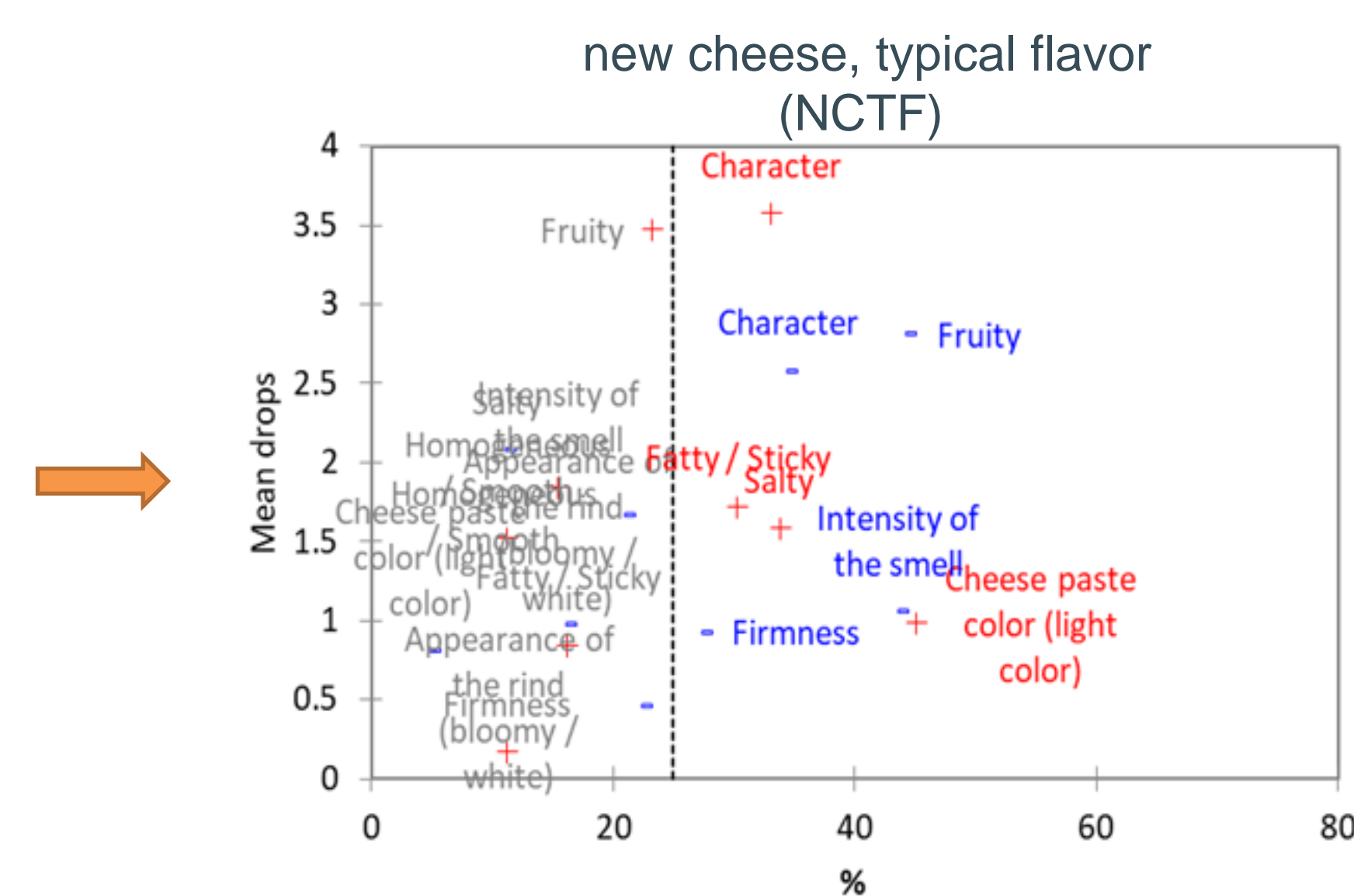
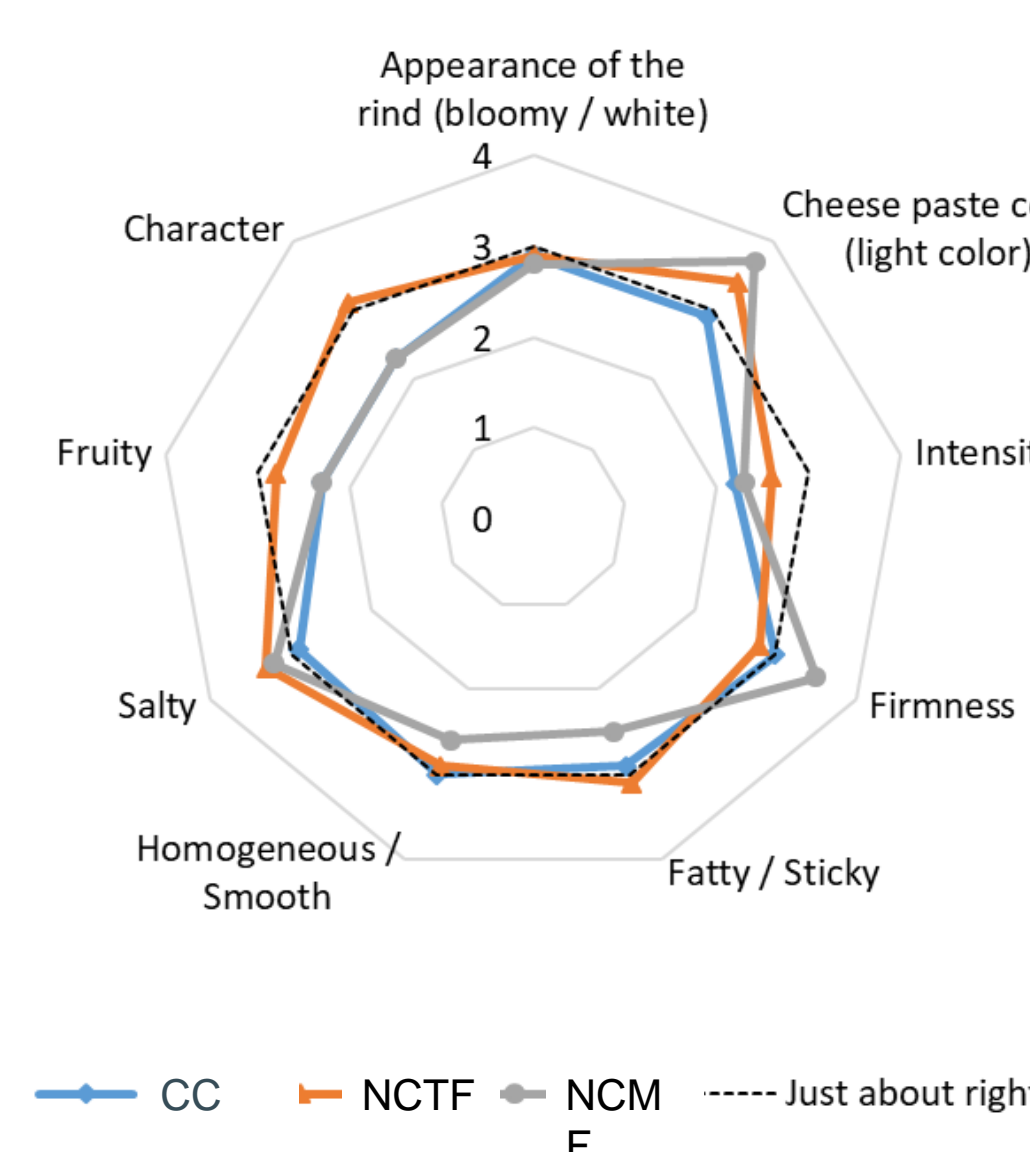
- Just about right (JAR) scale
- Not enough at all
 - Not enough
 - Just about right
 - Too much
 - Far too much

- Results : The consumer test revealed an encouraging level of acceptability for **From'Innov** 419 cheese (typical flavor). The analysis of the penalties specifies the sensory characteristics to be adjusted in order to further improve the acceptability of this cheese. The flexibility of the **From'Innov** process makes it easy to modify these characteristics.

Hedonic appréciation



Penalty analysis



Characteristics to be adjusted in order to further improve the acceptability : In **red**, the properties perceived as **too intense / present**. In **blue**, properties perceived as **not intense / present enough**. In grey, the sensory properties for which the response percentage is too low to conclude (< 25% of the panel).

Perspectives

- Understand if the market is ready to adopt such a technology: who could appropriate it and when? Major industries, SMI, farmers...
- Try to adapt this technology to farmers' group or artisans in order to preserve the profit margin for them.