

# THE APPLICATION OF DESIGN THINKING IN FOODSERVICE: DRY AGED SHEEPMEAT CASE STUDY

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## I. OBJECTIVES

Industry and government bodies are considering strategies to increase cull ewe meat consumption within Australia. Dry aging may improve cull ewe meat consumer acceptability. In order to understand the optimal dry-aged sheepmeat product formats from foodservice and consumer perspectives, design thinking principles were applied to a study combining qualitative and quantitative consumer methodologies.

## II. MATERIALS AND METHODS

This study's methodology is outlined against the design thinking process.

1. Understanding user needs: Chefs were provided with 2 entire 35-day dry-aged cull ewe carcasses. Dry-aged sheepmeat supply chain participants attended an interactive half-day workshop in which they observed butcher and chef preparation of the carcasses and tasted a range of dishes that were prepared from the carcasses. During the workshop, insights and challenges from the perspective of consumer, butcher, chef, and producer were captured in facilitated group discussions and 1:1 interviews.

2. Problem definition: Insights gathered from stage 1 were incorporated and prioritized in a briefing document.

3. Ideation: Twenty-five food service professionals were briefed on the outcomes of stages 1 and 2 and subsequently participated in a facilitated ideation session. After assessment by the group, 20 concept dishes were put forward for testing.

4. Concept development/testing: The 20 concepts generated from the ideation session were turned into image or product stimuli used in 2 perceptual mapping sessions. All participants were food service professionals.

5. Consumer testing: Eight concept dishes were selected for testing with consumers ( $n = 26$ ) and rated for liking and premiumness.

## III. RESULTS

Key findings included the fact that many chefs were not experienced with cooking cull ewe meat and often showed a preference for loin cuts, mistakenly assuming that meat from cull ewes had similar properties to lamb and would be suitable for grilling. After experiencing cull ewe meat, their preference changed to slow-cooked leg and shoulder cuts. Concept testing indicated dry-aged cull ewe meat suited a range of dishes covering the full range of economy to premium dishes and were suited to menus ranging from classic to "foodie" (a menu focused on delivering new or novel eating experiences). Figure 1 is an example concept map. All 8 dry-aged mutton concept dishes achieved liking scores  $>7$  and therefore were highly acceptable. Overall, there were differences in liking ( $P < 0.001$ ); the 5 most liked dishes (statistically similar) scored  $>8/9$ . These dishes included pitas (marinated silverside

roasted at 160°C to internal temperature of 65°C), shoulder (braised at 180°C for 5 h), pho (sous vide backstrap at 58°C, 10 h), piccata (3-mm topside slice, crumbed and shallow fried), and smoked mutton salad (silverside; smoked 10 min, roast at 120°C to internal temperature of 68°C). Premiumness ratings for the 5 most liked dishes differed ( $P < 0.001$ ); the most premium and statistically similar scored  $>4.7/5$  (shoulder and smoked mutton salad), and the least premium (pitas and piccata) scored 3.71 and 3.69/5, respectively.

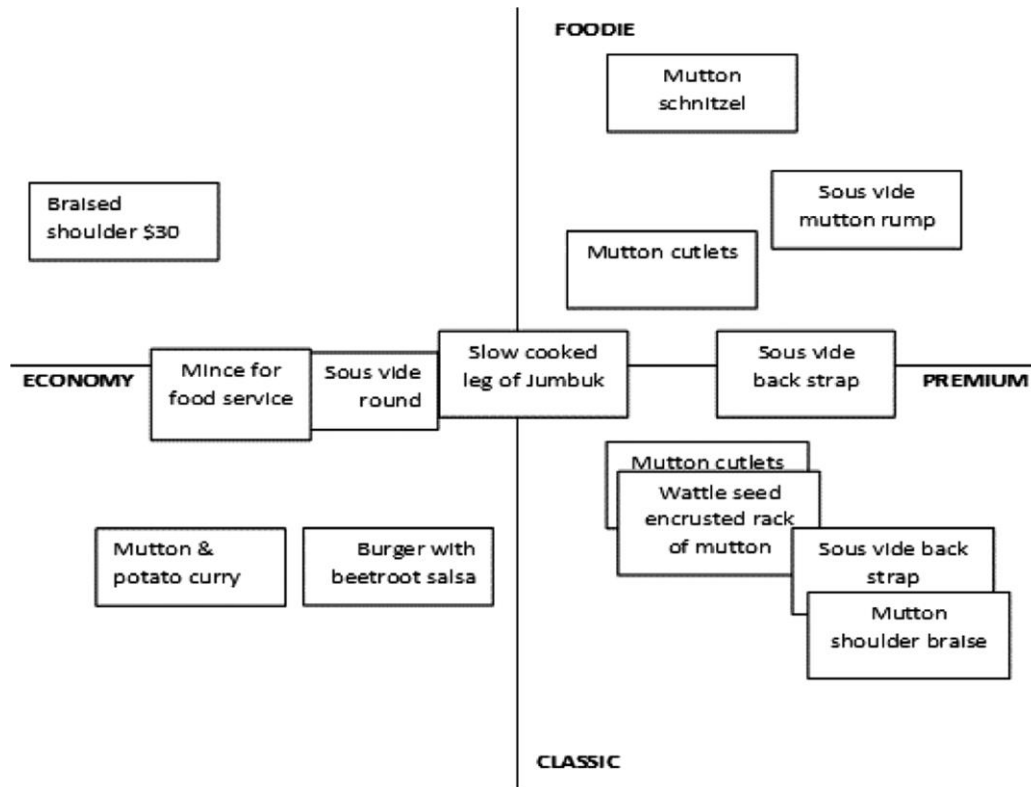


Figure 1.

Concept map from focus group 2. illustrating positioning of concept dishes plotted against eating experience; economy to premium (x-axis) and menu type; classic to foodie (Y-axis). Foodie refers to a menu focussed on delivering new or novel eating experiences.

#### IV. CONCLUSION

The study highlighted the need for cooking guidelines for cull ewe meat. Foodservice product preference was driven by eating quality, convenience, and versatility of cuts, with braising of large cuts or sous vide of small cuts providing consistent quality and easy preparation in the restaurant setting. Consumer testing confirmed the acceptability of these dishes.

Keywords: consumer acceptance, cull ewe, design thinking, foodservice