Rank / ID	Need	Examples of need / requirements
1	Food preservation & extended shelf-life	Shelf life of natural ingredients or new processes; extended shelf life, especially focused around regulatory driven challenges (eg sulphites) - also focused around stability of active ingredients (eg minerals and vitamins); novel processes for preserving nutritional value of products; technologies for food preservation; reduction of enzymatic darkening in chilled dough - antimicrobial options that don't require direct food contact for efficacy; multi layer jars, bottles and thermoforming for extending shelf life; ingredients to extend shelf life.
2	Coatings & barrier materials for packaging	Uv protection for transparent flint glass at affordable cost; coatings & barriers for packaging; simple, sustainable protective coatings; low energy curing of coatings; enhanced coating adherence; corrosion inhibitors; coatings to prevent migration through packaging, ideally selectively printable; moisture barrier technologies; sealing solution to reduce moisture immigration within a composite system; improve adhesion of mineral pigments to cellulosic surfaces; multi layer injection, blow and thermoforming; label barrier packs.
3	New, sustainable or compostable packaging materials	New container materials: alternatives to known glass, pet, aluminium and plastic pouches; renewable/compostable packaging; bio-derived food compatible polymers; alternative materials to polyethylene coated paperboard for freezer applications; innovative and environmentally friendly new mono material film materials for packaging ready-to-heat (rth) foods; compostable barrier films.
4	Reduce sugar in beverages and food	Process development - recipe etc; sugar content vs sweetness experience; solutions to reduce sugar in beverages and food; lowering sugar in products
5	Reduce fat/sat fat	Solutions to reduce fat; lowering fats in products; process development - recipe etc; reduced fat for fried crumb.
6	Natural/clean label ingredients (esp. Colours & preservatives)	Natural preservatives and antioxidants stable in alcoholic beverages; natural/clean label ingredients (esp. Colours); label-friendly yeast and mold inhibitors; clean label ingredients: ingredients that add texture and mouthfeel to foods; emulsifiers to replace mono- and di-glycerides and lecithin; replacements for or extenders of guar gum and/or gelatine. Natural red colour for foods & green colour for herbs and vegetables; a food-grade technology that we can use in products that contain herbs and vegetables - it must be natural (not artificial), work over a twelve-month shelf life and be cost-effective. Ideally the technology is generic, i.e. Applies to various sorts of herbs and vegetables.
7	Fibre fortifications	Beta glucan oats and oats/barley fractions; fibre fortifications ingredients that are very easy to use and well tolerated; increasing nutritional value content in processed food; increasing nutritional value content in processed food.
8	Lowering salt in products	Methods and technologies to reduce salt content in products without impacting taste; salt reduction ingredients; less salt: salt alternatives, technologies that address sensory and taste perception; tools and devices to help educate consumers; methods that could be used in professional kitchens.
9	Solutions in calorie reduction/non-caloric	Natural calorie reduction/zero calorie, great taste; bulking agents that have fewer calories than sugar; total calorie reduction without affecting taste.
10	Materials, formulation or processing to deliver desired food properties	"soft" deposit of breaded product (so crumb not lost); reduction in tortilla sticking through raw materials, formulation or processing; technology to enable the production of a high quality, evenly weighted product with a soft core; method of incorporating particulate inclusions within an aerated product; adavantaged pellets; food oil spray technology .
11	Novel opening, closing, sharing and portioning technologies for enhanced consumer packaging interaction	Novel opening, closing, sharing and portioning technologies for enhanced consumer packaging interaction; novel closures & dispensing; injection and thermoformed portion packs.
12	Self cooling/heating container	Self-cooling container at affordable cost and low impact on environment; self cooling/heating container/can.
13	Easy open/convenient packaging (eg for elderly/impaired)	Easy open/convenient packaging (eg for elderly/impaired); easier opening or closing of metal packaging; novel opening, closing, sharing and portioning technologies for enhanced consumer packaging interaction; alternative closure mechanisms and resealable packaging.
14	On-line printing	Industrial digital printing capability: wood/card/plastic/paper/textiles etc.; on-line multi-colour film and carton printing; online printing in store or at manufacturer.
15	Process monitoring	Device to measure aging process parameters in real time in wooden casks and barrels; low-cost sensor technologies; online sensor for mycotoxin content; rapid analysis method to determine ice crystal size in frozen foods solids measurement.
16	Sorting, scanning and vision systems for high speed	Novel technologies for high-speed product feed, defect detection, ejection; scanning and vision systems for high speed; seeking innovative methods for size sorting; small tri-axial ellipsoids solids measurement.
17	Food grade packaging materials	Food grade packaging materials; food grade colours for use in inkjet printers, especially white and green - specifically ink encapsulation chemistries; large supplier to the food industry.
18	Lightweighting/packaging materials reduction	Lightweighting; reduction in packaging material used in cartons; reduction in packaging material used in shipping containers; substantial package weight reduction without sacrificing performance; lightweighting is an integral part of all design work; better packaging: multipurpose/lightweight/cost effective/sustainable.
19	Packaging interacting with consumer	Cost effective, easily integrated solutions; dispensing, handling and storing; personalisation of offers via packaging.
20	Technologies offering enhanced consumer interaction	Eg sensation/perception altering coatings for metal packaging; dispensing, handling and storing; edibles.
21	Cheap bulk ingredients (for food)	Waste to worth bulking agents that have fewer calories than sugar.

22	New mouthfeel sensation	New mouthfeel sensation and broader sensory experiences; ingredients to modulate mouthfeel.
23	Altering taste	Keeping taste and managing cost low water activity date paste
24	Preserving food naturally - especially colour	Ways to preserve shape and colour of leaves and/or fruit pieces for months; preserve colour of natural ingredients; ways to achieve broad spectrum anti-microbial stability - ideally achieving that naturally, specifically in the aqueous phase of water in oil spreads, oil in water emulsions, and intermediate moisture foods for savoury applications.
25	Novel sweeteners	Novel sweeteners; sweetener development capability.
26	Oxygen scavanging/minimisation	Oxygen scavenging; high speed packaging with low residual oxygen; fresh produce applications.
27	Printing on food & 3d printing of food	Novel technologies & processes; conversation about printing on food at extrusion product; printing barcodes direct.
28	Product optimisation for microwave cooking	Fresh microwavable crumb (that delivers oven baked experience); food grade edible materials that reflect microwaves; microwave benefits.
29	Platform technologies for food ingredients	Efficient dehydration; platform technologies that provide new routes to manufacture food ingredients (for example by enzyme hydrolysis, fermentation, or extraction from novel raw materials) for health.
30	Tooling & technology for agile manufacturing	Tooling & technology for agile manufacturing; rapid molds for inj molding; vacuum cooking.
31	Bacteria control/life extension in packaging	Bacteria control/life extension in packaging; bacteria control in map packaging for fresh poultry products - life extension; technologies for food preservation.
32	High viscosity dispensing	Dispensing a highly viscous liquid from flexible bags in a controlled manner; high-viscosity airless dispenser; piston packs and airless systems.
33	Low-energy processes/energy recovery	Energy recovery for low grade heat (already have solutions in energy recuperation in drying processes); low energy methods for producing fine powder mixtures; energy recovery solutions from low grade heat.
34	Mobile technology	Innovative applications of mobile technology to drive impulse purchase.
35	Digital technologies for marketing & e-commerce	Emerging digital marketing technologies; digital technologies to enable mobile marketing & e-commerce of consumer food products.
36	Reduced food waste through full utilisation of natural products	Novel processes; utilisations of bi-products from chicken.
37	Control of contamination in food processing	Cleaning technologies: reduction of mycotoxins in food commodities through cleaning and sorting; new approaches for inactivation and cleaning; control campylobacter in chicken products.
38	Emulsifiers	Low odour, non-GMO source of lecithin; ingredients that act as emulsifiers, with high oil-loading capacity for use in beverages.
39	Ingredients which enable exercise & recovery	Balanced energy; soft drink applications.
40	Ingredients/products with established health claims	Ingredients/products with established health claims relevant to kids, adults inc. cognitive; ingredients with proven benefits to human health, in particular digestive health and weight management; potential ingredients must be supported by positive evidence from human intervention studies.
41	Solutions for incorporating healthy ingredients	Solutions for incorporation of whole grain into wheat-based baked goods - and other active ingredients.
42	Consistent, safe cooking	"perfect every time" BBQ chicken (via packaging, control or ingredients); temperature control of food during microwave heating.
43	Moisture management	Low water activity date paste; solution to reduce moisture migration within a composite system.
44	Anti-counterfeit technology	Embedded anti-counterfeit image technology, non visible to users; needs "app" to identify; anti-counterfeit technology.
45	Traceability solutions	Tracking of metal packaging through supply chain; traceability solutions.
46	Technologies for material forming, joining & shaping	Technologies for metal forming, joining & shaping; injection molding foods.
47	Multi-fluid/component dispensing	Ways to keep a cocktail separate in two or three parts until time of consumption; pack design facilities; twin neck etc.
48	Reclosing technology for metal cans (beverage)	Reclosing technology for metal cans (beverage).
49	New packaging decoration technology	Sustainable decoration systems for metal/containers; new decoration technologies.
50	Breakthrough packaging components	Breakthrough packaging components: alternatives to known containers, closures, labels, gift boxes, cartons and pallets; capabilities across injection, blow and thermoforming.