Rank	Innovation Need	Details
	New, sustainable or compostable	Renewable material for packaging, e.g. glass bottle replacement, PET replacement - Sustainable,
	packaging materials	sourced, raw materials Bio derived food compatible polymers New, sustainable or compostable packaging materials 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 Next generation of plastic packaging – what is the next PET, cheaper, more sustainable and with better barrier properties?
2		Simple, sustainable protective coatings, low energy curing of coatings enhanced coating adherence Corosion Inhibitors Coatings to prevent migration through packaging, ideally selectively printable Moisture Barrier Technologies Barriers fo oxygen and CO2 Sealing solution to reduce moisture immigration within a composite system Edible adhesives and coatings that are activated with a low energy source or temperature Multi layer injection, blow and thermoforming. Label barrier packs.
	Reduce fat / Sat Fat / Fat & Oil replacement	Solutions in fat / SAFA reduction Alternative fats & oils - hexane / high-temperature Reduced fat for fried crumb Non-Oil Frying (alternative food grade fluid that has a flash point > 450 to 500°F) Fat replacement Ingredients that enable fat reduction through exercise Lowering fats in products
4	Packaging interacting with consumer	eg sensation / perception altering coatings for metal packaging Dispensing, handling and storing Consumer information Packaging technologies that can allow new interaction with the consumer in addition to an element of personalisation Personalisation of offers via packaging
	Novel opening, closing, sharing and portioning technologies for enhanced consumer packaging interaction	Easier opening or Closing of metal packaging Novel closure Injection and thermoformed portion packs Food on the go
6	Lightweighting / packaging materials reduction	Reduction in Packaging Material used in Cartons, Reduction in Packaging Material used in Shipping Containers Substantial Package Weight Reduction without Sacrificing Performance Generic interest Economical packaging barrier Lightweighting is an integral part of all design work
7	On-line printing	Industrial digital printing capability: wood/card/plastic/paper/textiles etc Printing On-line Multi-Color Film and Carton Printing online printing Personalisation In store or at manufacturer
	Process monitoring, Sorting, Scanning and Vision Systems for High Speed	Rapid analysis method to determine ice crystal size in frozen foods / Seeking Innovative Methods for Size Sorting Small Tri-Axial Ellipsoids Noninvasive potato defect and content characterization Sortation of mixed Product for despatch / Distribution robust economical inline distillation process monitoring
9	Reduce sugar in beverages and food	Solutions in sugar reduction Lowering sugar content retaining sweetness level, low calori sweeteners Reduction / alternatives Lowering sugar in products solutions in sugar reduction
10	Solutions in calorie reduction / Non-caloric	Reduction / alternatives Total calorie reduction without affecting taste solutions in calorie reduction
11	New sustainable sources of Protein	Sustainable protein sources Chicken protein for health drink Sports Nutrition Business commercially viable alternatives to dairy protein
	Natural / Less processed / Clean Label Ingredients (esp colours & preservatives)	Natural anti-oxidants Less process/refined food ingredients (perceived as more natural and less processed), especially: Fats & Oils (see the recent Foodbabe post on "Processed to Death"); Grains; and Label-Friendly Yeast and Mold inhibitors Clean label presevatives Natural Ingredients to Replace Synthetic Ingredients
13	Oxygen Scavanging / minimisation	High Speed Packaging with Low Residual Oxygen Materials with oxygen scavanging properties incorporated into pack Produce quality improvement throughout life Fresh produce applications
14	Supply chain Traceability solutions	Tracking of metal packaging through suply chain Traceability solutions tracking & ID, Big Data Generic interest Extending the supply chain
	Materials, formulation or processing to deliver desired food properties	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 "Soft" deposit of breaded product (so crumb not lost) Advantaged and Differentiated Grain Milling & advantaged pellets, Reduction in Tortilla Sticking through Raw Materials, Formulation or Processing
16	Food grade packaging materials	Food grade colours for use in inkjet printers, especially white and green Food grade packaging materials Next generation of plastic packaging with better barrier properties? Large supplier to the food industry improved essential oil/ finished flavour packaging
17	Self cooling / heating container	Self-cooling can and self-heating can Self cooling Eating on the go Material or Mechanism to Maintain Low Product Temperature Outside of Fridge self heating
	Big Data, Mobile, Apps, Gaming & Social Media	Innovative applications of mobile technology to drive impulse purchase Innovative applications of mobile technology to drive impulse purchase Extending the supply chain
	Digital Technologies for Marketing & Ecommerce	Digital Technologies to Enable Mobile Marketing & Ecommerce of Consumer Food Products
	Ingredients which enable exercise & recovery	Alternative to caffeine for energy, without negative impacts – ideally a sustained release throughout the day Dietary supplement Ingredients which allow you to exercise harder, for longer / aid recovery Soft drink applications

stategies ingredients/products with established health claims relevant to adult health and exercise incorporating healthy ingredients New mouthfeel sensation / novel texture Chemical / enzymatic treatments for Advantaged Food Products (e.g. a product that when chewed releases healt, enzymes to modify starch so finished product has a harder texture, etc.) Introvative technologies for an allow us to increase the pleasure of rinking for beverage applications Novel Sweetners Sweetness enhancing technologies/ingredients (non-artificial) New low calori sweetners nove beverage sweetners Technologies for Food Preservation & Extended Shelf-Life Food Preservation & Extended Shelf-Life Food Grade Edible Materials that Reflect Microwaves Fresh microwavable crumb (that delivers oven baked experience) Food Grade Edible Materials that Reflect Microwave Breish microwavable crumb (that delivers oven baked experience) Food Grade Edible Materials that Reflect Microwave Breish microwavable crumb (that delivers oven baked experience) Food Grade Edible Materials that Reflect Microwave Breish microwavable crumb (that delivers oven baked experience) Food Grade Edible Materials that Reflect Microwave Breish microwavable crumb (that delivers oven baked experience) Food Grade Edible Materials that Reflect Microwave Breish (the Internation of Internation) In-process cleaning, hyglene & Control of Control amylobocates Advantaged and rover stemizion technologies Novel Microbiological load reduction / Non destructive bacteriorides Theman process to achieve commercial stemity Food Grade Edible Materials that Reflect Microwave Breish (the Microwave Breish) Food Grade Edible Materials that Reflect Microwave Breish (the Microwave Breish) In-process cleaning, hyglene & Control of Microbiologics of decubric of the Actient of the Microbiologics of Process and Consumer Microwave Breish (the Microbiologics to decubric the Mic	21	Ingredients/products with established	Solutions for Incorporation of Whole Grain into Wheat-Based Baked Goods Consumer health
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