PENGEMBANGAN PRODUK PANGAN FUNGSIONAL BERBASIS SUSU

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SURAKARTA

...PENGEMBANGAN PRODUK

- Kompetisi industri → inovasi
- Sifat Konsumen yang cepat bosan → inovasi
- Perkembangan teknologi → produk “baru”

...KATEGORI PRODUK BARU

(1) produk baru dengan penciptaan pasar yang baru (*new to the world products*),

(2) produk baru dengan pertama kali memasuki pasar yang sudah ada untuk produk semacam (*new product lines*),

(3) produk baru hasil modifikasi produk lama (*additions to existing product lines*),

(4) produk baru untuk menggantikan produk yang ada untuk meningkatkan kinerja dan nilai *(improvements and revisions to existing products*),

(5) produk yang ada yang ditargetkan untuk pasar baru atau segmen baru (*repositionings*),

(6) produk baru dengan harga lebih rendah (*cost reductions*).

...SENI PENGEMBANGAN PRODUK

- **60-80% produk “baru” gagal !!!**

  a. 70-80 % gagal untuk produk line extension

  b. 80-90 % gagal untuk produk yang benar-benar baru

- Berarti terjadi kegagalan dalam innovasi atau kegagalan dalam pemasaran → produk dikategorikan sebagai produk yang membosankan (konsumen ingin varian produk dengan cepat)

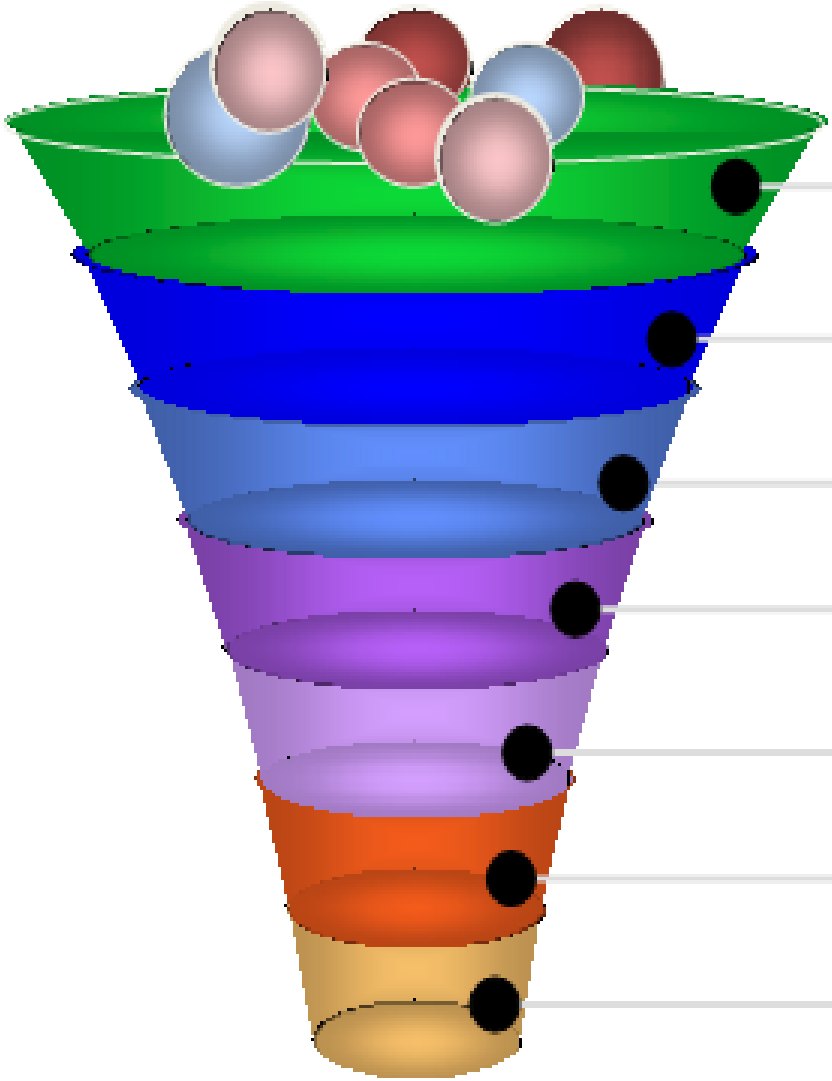
...TREND INDUSTRI PANGAN

- Probiotic in many products
- Foods for beauty
- “Mood Food”
- Foods with less ingredients but better taste and quality

...KECENDERUNGAN KONSUMEN

- **Convenience,** ex: portion size, packaging
- **Health and Wellness,** ex: probiotics
- **Sophistication (regional fusion),** ex: exotic taste and texture meet the consumers' demand
- **Pleasure/ fun**

New-Product Development Process



New-Product Strategy

Idea Generation

Idea Screening

Business Analysis

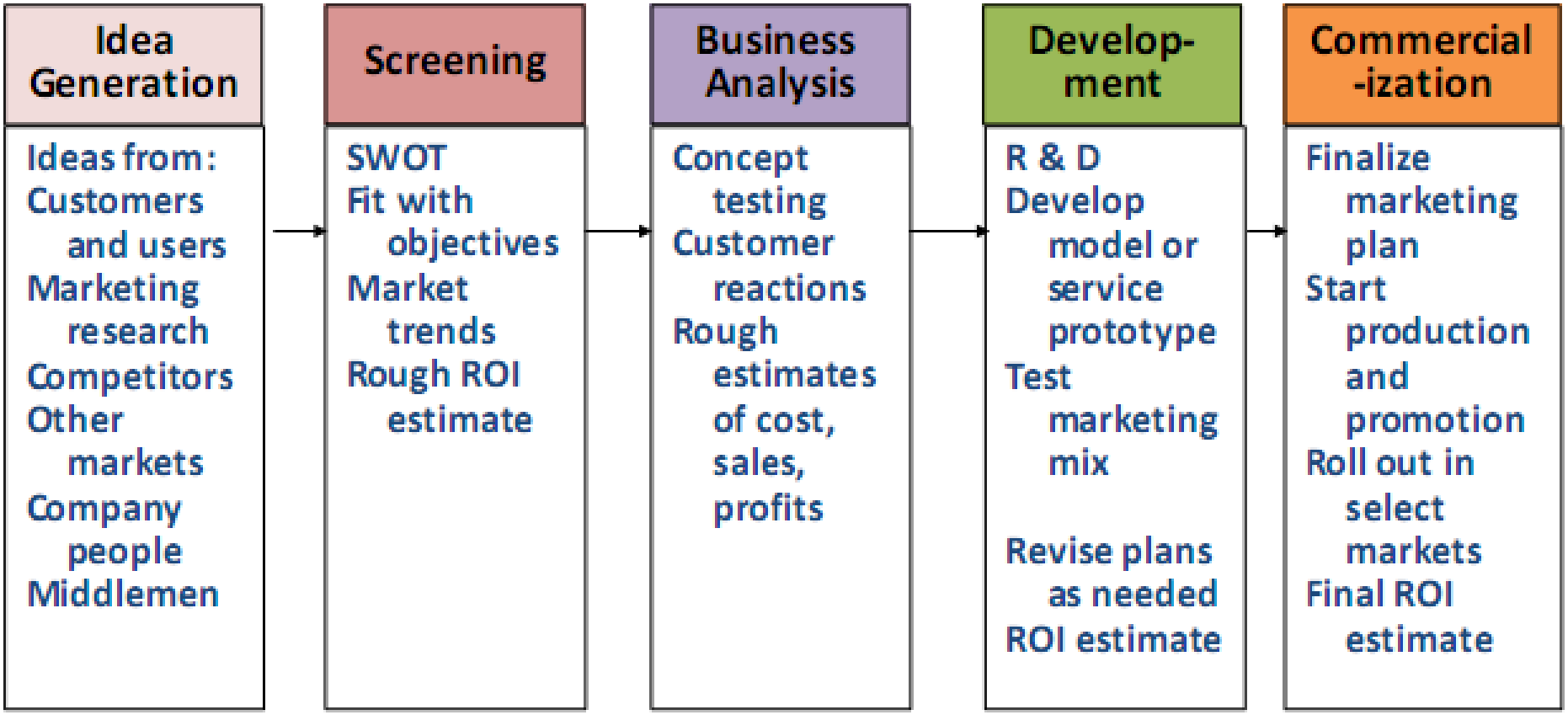
Development

Test Marketing

Commercialization

New Product

New Product Development Process



...PENGEMBANGAN PANGAN FUNGSIONAL BERBASIS SUSU

- Mengurangi komponen yg berefek fisiologis negatif,
  contoh: ??? fungsi kesehatan:???
- Menaikkan komponen yg berefek positif,
  contoh: ??? fungsi kesehatan:???
- Menambahkan ingridien aktif,
  contoh: ??? fungsi kesehatan:???
- Merubah karakter susu dengan fermentasi atau hidyrolisis,
  contoh: ??? fungsi kesehatan:???

Table 1 – Bioactive peptides identified in cheese varieties and fermented milk products (modified from Korhonen and Pihlanto, 2006).

Product	Examples of identified bioactive peptide	Bioactivity	Ref.
Cheese type			
Cheddar	α_{s1}- and β-Casein fragments	Several phosphopeptides	Singh et al. (1997)
Italian varieties: Mozzarella, Crescenza, Italico, Gorgonzola	β-cn f(58-72)	ACE inhibitory	Smacchi et al. (1998)
Gouda	α_{s1}-cn f(1–9) β-cn f(60–68)	ACE inhibitory	Saito et al. (2000)
Festivo	α_{s1}-cn f(1–9), f(1–7), f(1–6)	ACE inhibitory	Ryhänen et al. (2001)
Emmental	α_{s1}- and β-Casein fragments	Immunostimulatory, several phosphopeptides, antimicrobial	Gagnaire et al. (2001)
Manchego	Ovine α_{s1}-, α_{s2}- and β-casein fragments	ACE inhibitory	Gomez-Ruiz et al. (2002)
Emmental	Active peptides not identified	ACE inhibitory	Parrot et al. (2003)
44 samples of hard, semi-hard and soft cheese samples	Val-Pro-Pro, Ile-Pro-Pro	ACE inhibitory	Bütikofer et al. (2007)
Cheddar	α_{s1}-cn f(1–6), f(1–7), f(1–9), f(24–32), f(102–110), β-cn f(47–52), f(193–209)	ACE inhibitory	Ong et al. (2007)
Fermented milks			
Sour milk	β-cn f(74–76, f(84–86) κ-cn f(108–111)	Antihypertensive	Nakamura et al. (1995)
Yoghurt (sheep milk)	Active peptides not identified	ACE inhibitory	Chobert et al. (2005)
Dahi	Ser-Lys-Val-Tyr-Pro	ACE inhibitory	Ashar and Chand (2004)

Abbreviations: α_{s1}-cn = α_{s1}-casein, β-cn = β-casein, κ-cn = κ-casein.

Table 2 – Commercial dairy products and ingredients with health or function claims based on bioactive peptides (modified from Korhonen and Pihlanto, 2006).

Brand name	Type of product	Claimed functional bioactive peptides	Health/function claims	Manufacturer
Calpis	Sour milk	Val-Pro-Pro, Ile-Pro-Pro, derived from β-casein and κ-casein	Reduction of blood pressure	Calpis Co., Japan
Evolus	Calcium enriched fermented milk drink	Val-Pro-Pro, Ile-Pro-Pro, derived from β-casein and κ-casein	Reduction of blood pressure	Valio Oy, Finland
BioZate	Hydrolysed whey protein isolate	β-Lactoglobulin fragments	Reduction of blood pressure	Davisco, USA
BioPURE-GMP	Whey protein isolate	κ-Casein f(106–169) (Glycomacropeptide)	Prevention of dental caries, influence the clotting of blood, protection against viruses and bacteria	Davisco, USA
PRODIET F200/Lactium	Flavoured milk drink, confectionery, capsules	α_{s1}-Casein f(91–100) (Tyr-Leu-Gly-Tyr-Leu-Glu-Gln-Leu-Leu-Arg)	Reduction of stress effects	Ingredia, France
Festivo	Fermented low-fat hard cheese	α_{s1}-casein f(1–6), (1–7), (1–8)	No health claim	MTT Agrifood Research Finland
Cysteine Peptide	Ingredient/ hydrolysate	Milk protein-derived peptide	Aids to raise energy level and sleep	DMV International, the Netherlands
C12	Ingredient/ hydrolysate	Casein derived peptide	Reduction of blood pressure	DMV International, the Netherlands
Capolac	Ingredient	Caseinophosphopeptide	Helps mineral absorption	Arla Foods Ingredients, Sweden
Pepto Pro	Ingredient/ hydrolysate	Casein derived peptide	Improves athletic performance and muscle recovery	DSM Food Specialties, the Netherlands
Vivinal Alpha	Ingredient/ hydrolysate	Whey derived peptide	Aids relaxation and sleep	Borculo Domo Ingredients (BDI), the Netherlands
Recaldent	Chewing gum	Calcium casein peptone-calcium phosphate	Anticariogenic	Cadbury Adams, USA

TERIMA KASIH