Industrial Transformation Research Hub (ITRB)

RESEARCH STREAM:
PACKAGING INNOVATION &
ANTI-COUNTERFEITING
RESEARCH

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Research Stream: Packaging Innovation & Anti Counterfeiting

1. Know what is happening
2. Know what is available
3. Know how to prepare
4. Strategy of Options – UoM
5. Recommendations

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Know what is happening

• Counterfeited products increasing risks to Chinese health and safety.
• Escalating demand for Anti-Counterfeit Packaging & Tracking Technology (ACP).
• Market expected to reach US$62.5 billion globally by 2020.
• Asia Pacific region projected as fastest growing area (estimated. CAGR of 18.1%, 2015 to 2020).

Source. www.alliedmarketresearch.com

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Know what is happening

• Channel News Asia (Feb. 2014)
  – Over 1,200 tons of counterfeit and substandard foods and nearly 430,000 litres of counterfeit beverages were seized across 33 countries.
  – Oil, vinegar, biscuits, and chocolate bars to fake spices, condiments and substandard dairy products.
• Wine industry experts estimate 20% of wine bottles sold worldwide are counterfeit.
• In 2013, the Chinese Ministry of Public Security reported that the counterfeit products seized and destroyed included:
  – Food and beverages 5,000 tonnes
  – Drugs and tablets 2 billion tonnes
  – Pesticides, fertilisers and agricultural seeds 3,100 tonnes
  – Personal care products, machinery and electrical products 53 million tonnes.

Counterfeiters are becoming more sophisticated in committing fraud because of:

- Low cost technology
- Globalization
- Consumer complicity
- Expansion of channels and markets
- Powerful worldwide brands
- Weak national and international enforcement
- High tariffs and taxes.
Some people may not mind to purchase fake clothes and apparel if the counterfeited goods are cheaper and look and feel like the original brands.

Fake foods however, have no benefit to consumers and are avoided at all costs.
Meet Con, the Artist

I want to make easy money!

Access to sophisticated manufacturing

Mass, Low-wage Labour Force

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Beat Con on...

TIME

Reuse  Copier  Re-Engineer  Corruption  Rip-off Replicas

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Know what is available

How can I prevent my IP from being damaged or stolen?

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A LOOK AT HONEY

MEDIUM - HIGH RISK

• Long shelf life if stored in appropriate temp. range.

• High variable Asian consumer group.

• Growing counterfeited product worldwide.
  – Chongqing's Hechuan district police have discovered a production site for fake honey and confiscated about 500 kilograms of the fake nectar containing zero percent real honey and 187 mg of aluminium residue per kg of honey.

• Highly adaptable packaging.

• Where do we fit in?

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CASE STUDY - HONEY

MEDIUM - HIGH RISK

OVERT

COVERT

REMOTE

STRUCTURAL

TRACK & TRACE

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OVERT

done or shown openly; plainly apparent.

Brand enhancing view and interact applications

Know what is available

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CASE STUDY - HONEY

OVERT ARTWORK

1. GRADIENT COLOURS & COMPLEX BACKGROUND
2. CUSTOM FONTS
3. INDUSTRY RECOGNISED BADGES & AWARDS
4. IMAGERY REFERENCING SPECIFIC LOCATIONS
5. UNIQUE TEXTURES
6. ORIGIN REF.
7. HEALTH BENEFITS
8. UNIQUE STORY WITH GRAPHICS

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CASE STUDY - HONEY

EXAMPLES OF OTHER OPTIONS

• OVERT SECURITY PRINTING
• VOID PANTOGRAPH
• HANDWRITTEN SIGNATURE ON TEXTURED PAPER
• LOTS OF OTHERS

• OVERT TECHNOLOGY
• INTERACTIVE THERMOCHROMATIC INKS
• LOTS OF OTHERS

• OVERT TECHNOLOGY
• HOLOGRAPHIC
• FOIL EMBossING
• LOTS OF OTHERS

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Know what is available

COVERT

not openly acknowledged or displayed, concealed.

embedded authenticity security

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CASE STUDY - HONEY

COVERT TECHNOLOGY OPTIONS

- PRINTING
- SPRAY ADHESIVE DATA DOTS
- HIDEN UV INKS
- LOTS OF OTHERS

- ELECTRONIC
- RFID TAGS
- LOTS OF OTHERS

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REMOTE

Situated far from the point of connection.
digital connection for distant authentication

Know what is available

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CASE STUDY - HONEY

REMOTE TECHNOLOGY

Customer Validation Security

SIMILAR TO VALIDATION LOGIN CODES TO PRODUCT WEBSITE

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Know what is available

STRUCTURAL

Relating to things perceived through the senses.

Tangible protection measures

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CASE STUDY - HONEY

STRUCTURAL TECHNOLOGY OPTIONS

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Know what is available

TRACK&TRACE

Determining the Past and Current locations.
Checkpoints for monitoring origin and logistic movements.

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CASE STUDY - HONEY

TRACK AND TRACE

Customer can authenticate product using a unique QR or serial codes with a free app on their smart phone.

1. **MaXQ : AMCOR**

2. **AuthenticateIT + GS1**

3. **OZIRiS : Beston Global Food Co.**

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Know how to prepare

When should I consider anti-counterfeiting technology?

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Know how to prepare

‘There is no silver bullet for counterfeiting. It’s really a matter of putting a business process in place with measures that help protect the brand and the consumer.’

Source. http://www.abc.net.au/radionational
Know how to prepare

Construct a counterfeiting plan for each stage of growth

Cost / Risk Analysis

Risk (Low to High 1 - 3)

Value

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Know how to prepare

Strategy of Options - UoM

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Strategy of Options

• **Objective:** Create a strategy of options for industry, of which packaging technologies can be bundled together to fit ‘everyday’ to ‘premium’ forecasted trajectory of risk.

For example: This could give industry options:

– If everyday Risk 1, select 1 out of 4 options
– If in-between Risk 2, select bundles 2 out of 4 options
– If premium Risk 3, select bundles 4 out of 6 options.

• Options can be available already, others can be in the pipeline.
• Options can cover Anti-Counterfeit, Anti-Tampering & Authentication
• Options can cover on-package–based solutions, serialization (or track and trace)—including bar coding and RFID, direct product testing, DNA, Decoration,

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Strategy of Options: ANTI COUNTERFEITING DATABASE OF BOTH TODAY’S TECHNOLOGY AND FUTURE TECHNOLOGY

- Coding & printing
- RFID
- Holograms
- Security labels
- Packaging designs
- Digital
  - mass sterilization
  - mass encryption
- Surveillance tech
  - radio frequency acoustic-magnetic technology
  - electro-magnetic technology
  - forensic markers
Recommendations

1. **High security:** they must be as difficult as possible to forge or replicate.

2. **Easy visual judgement:** in most cases, you should be able to verify the document without the need for special equipment.

3. **Verification with a simple tool:** as a next level, a covert element should be included.

4. **Re-labelling or repacking prevention:** it should be possible to detect when an anti-counterfeit solution has been tampered with.

5. **Dynamic:** Security changes to stay ahead of copy cats.

6. **Stay Informed:** Digital and Printing technologies are continuously improving.

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The University of Melbourne offers

**Consumer Research Services** that supports Australian Businesses on identifying **key insights** that will align your brand to market needs and ensure cultural relevance.

**QMA** – Qualitative Multi-variant Analysis

www.foodvaluechain.unimelb.edu.au/resources/services
Thank you

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