Product Management

Office Hour – Kiran Kodavanti

Week 6 –Sunday, May 14 , 2023

Module 6 "Concept Development and Testing" *by Kiran Kodavanti*

ISB | Executive Education

Learning Outcomes

### Course/Program learning outcomes addressed this week:

- Evaluate product road-mapping and prototyping decisions using various product management techniques and practices.
- Outline a plan to create a competitive scalable product using key product development strategies and frameworks.

By the end of this week, you will be able to:

- Explain the importance of concept testing process during a new product launch.
- Describe the different types of concept tests and how to conduct the most common type of concept test.
- Describe the Long Tail Effect: How digital technologies are changing new product development.
- Understand potential and forecast.
- Estimate the market potential and forecast sales.
- Apply metrics to evaluate model forecasts and compare models.

- Creation of Product Concept
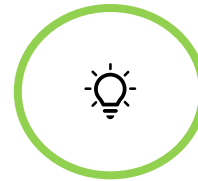
| Step 1 | Step 2 | Step 3 | Step 4 |
| Idea Creation | Technology Inputs | Form Inputs | Discussions & Descriptions |

Examples of Product Concept

Concept Testing

Why concept testing is so important
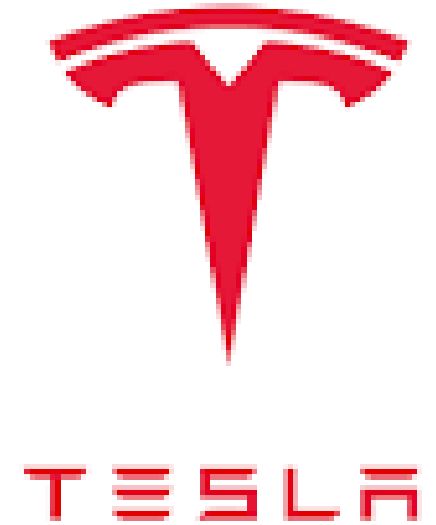
- Different types of Concept Testing

1.Monadic testing (single concept)
2.Sequential monadic testing (multiple concepts)
3.Protomonadic testing (multiple concepts with a preference at the end)
4.Comparative testing (comparing multiple concepts)
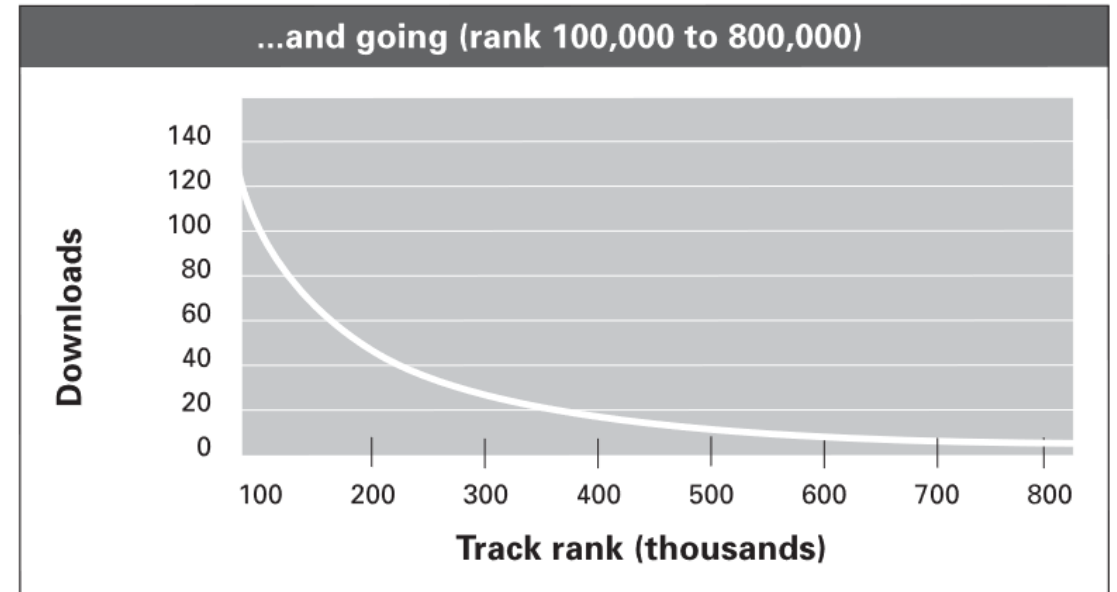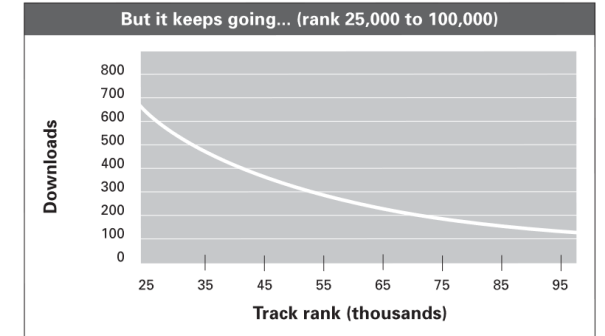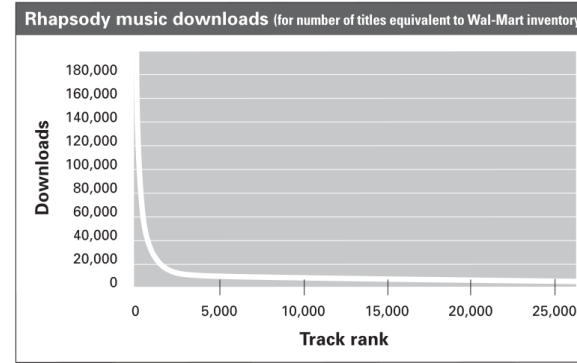
Examples of Concept Testing

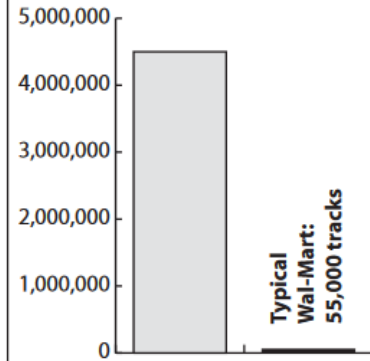Describe the Long Tail Effect: How digital technologies are changing new product development.

- MARKETS WITHOUT END

The new growth market: Products you can't find anywhere but online

Rhapsody
Total inventory:
4.5 million tracks

Typical Wal-Mart: 55,000 tracks

Netflix
Total inventory:
90,000 DVDs

Typical Blockbuster: 3,000 DVDs
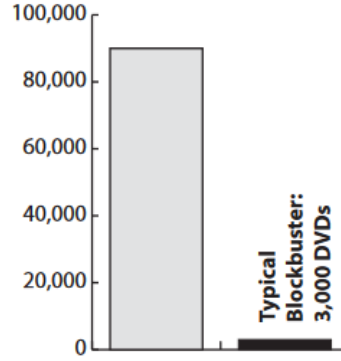
Amazon
Total inventory:
5 million book titles

Typical Barnes & Noble store: 100,000 books
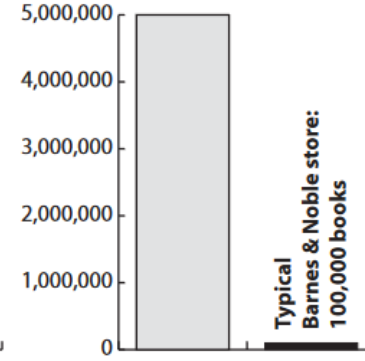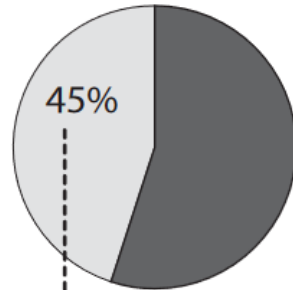
Total sales — 45%
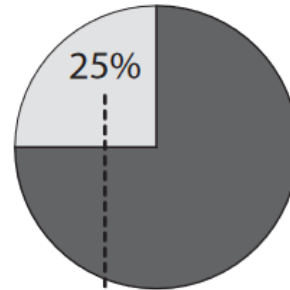
Total sales — 25%

Total sales — 30%
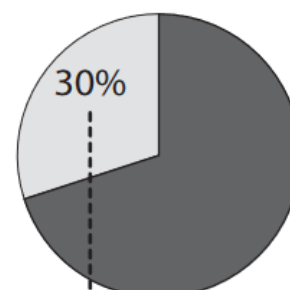
Products not available in largest offline retail stores

Data from companies and independent estimates; current as of March 2008

LONG TAILS
EVERYWHERE

Examples of Long Tail

- Estimate the market potential and forecast sales.

Market Potential

Sales Forecast

- Apply metrics to evaluate model forecasts and compare models.

Root Mean Squared Error (RMSE)

$$RMSE = \sqrt{\frac{1}{n} \sum_{i=1}^{n} (y_i - \hat{y}_i)^2}$$

Mean Absolute Error (MAE)

$$\frac{1}{n} \sum_{i=1}^{n} |y_i - \hat{y}_i|$$

- **Performance metrics for Time-series Forecasting models**

Required Assignment 6.3: Design a Research Plan for Concept Testing of a New Product

Assignment Instructions:

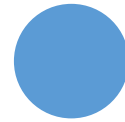Within this assignment, you will plan customer research for a new concept. As we learned, step 5 of concept testing is to measure customer response. One of the most important elements to research include the likelihood of purchase (purchase intent). The other important aspect to gauge is the purchase frequency. The aim of customer research is to set apart a 'faulty concept' from promising concepts and to not waste money on building products that people won't buy.

The assignment is divided into two parts:

i) In a few sentences, define a new product concept you would like to test.

ii) Define how would you test the concept through customer responses. This step should consist of elements you would test (two of which are mentioned above—intent and frequency). You have to come up with one more element that should be tested. Also show the questionnaire consisting of one question each for each element.

Please write at least one paragraph that explains your test and how it would help test the concept.

Diapers

During the 1990s, an average of 4 million babies are born annually in a country. The average child goes through 7,800 diapers in the first 130 weeks of life (2.5 years) until toilet training or 60 per week (Deveny, 1990).

(a) What is the annual market potential for disposable diapers?

(b) What other qualitative issues need consideration here?

Consumption of Ice cream

In 1999, the population of a country was 273,401,000. Of these, 16 million suffered from diabetes (and hence could not consume regular ice cream) and 30 million were lactose intolerant (and hence could not eat ice-cream). On average, consumption per person is 46.6 pints per year. The average price per pint in 1999 was $3.19.

What is the market potential in (a) units and (b) dollars? ($ is used as a general unit of currency)

Required Assignment 6.4: Estimate the Market Potential for the Following Products: Diapers and Ice cream

- Q&A

Case Study

- **Scenario: Rideshare**

A rideshare company that launched in Indian Metros is testing out new geographic markets like Tier 2 cities. They can determine the market potential of new territories to determine which other cities make sense for the next phase of their expansion.

- Also plan a product concept for above scenario considering existing companies in rideshare business.

You can choose your own scenario also.

Live Session Experience Test - Open ended Q Copy

1. **What was the best part of this session and how has it helped you?** (Rank Order)
A rating of 5 is Strongly Agree; a rating of 1 is Strongly Disagree.

	1	2	3	4	5
Clear explanation of the topic	○	○	○	○	○
Interactive discussions	○	○	○	○	○
Increased confidence in applying the concepts	○	○	○	○	○

2. **Rate the overall satisfaction level of this session.** (Rating Scale) *

1: Not Effective, 5: Most Effective

| 1 | 2 | 3 | 4 | 5 |

3. **What according to you could be improved in this session?** (Short Answer) *

Short answer (100 characters)

- THANK YOU