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Problem solving Workshop

Developing a structured thought process for problem solving

How can ABC Bank make its credit card portfolio best in the market?

Definition of best?
- Bank/ Customer standpoint?
- By profitability, customer loyalty or number of cards

In what time frame?
- 2/3/5 years?

Best in what geography?
- Locally?
- Globally?

Challenge
- Enough ambiguity to stall further process

ABC is a leading bank in US and offers various products

- **Assets (home loan, mortgage, credit card),**
- **Liabilities (savings account) &**
- **Wealth management**

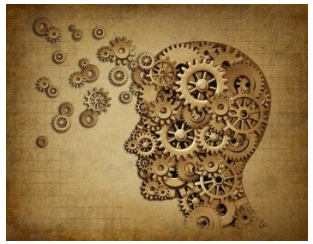
It is looking to increase product penetration amongst its customer base and wants to identify a sequence of next best products for each customer. The current PPC, on an average, is 1 and the bank wants to increase this to 3 over the next 2 years. You need to arrive at a strategy that will help the bank achieve this objective.

- A clear problem statement
- Good domain knowledge
- Familiarity with the products

How do we approach this problem?

A typical problem-solving process

Research and Context



Define the problem

Solve the problem

Implement the solution

Feedback Loop

Focus area for this training

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Key learning outcomes from the session

- … define a S.M.A.R.T. problem statement
- … understand the Problem Statement Worksheet (PSW)
- … develop a MECE Issue tree to identify solutions for a problem statement
- … solve a business problem through structured problem solving methodology

Defining the problem

What is a good problem statement?

E.g. How can ABC bank **increase** its **market share by volume** of their credit card portfolio in the **US** market from **6% to 10%** in **2 years** time?

Example:

The incidence of suspicious and fraudulent auto claims is on the rise. This increases the challenges for the claim adjusters during investigation & settlement.

Our client, an auto insurance company called XYZ Insurance, is worried as the fraud capture rate for them has been found to be alarmingly low. Currently, there are certain methods employed to uncover potentially fraudulent claims. However, given the industry benchmark for the fraudulent claims, XYZ feels there is a room for improvement.

Importance of defining the right problem

Initial Definition

Problem Definition

How do we develop a regression model to identify fraud claims to reduce losses?

Potential Solution

Develop a logistic regression model to predict fraud claims

Updated Definition

How do we reduce financial loss from suspicious claims ?

1. Develop a regression model to predict fraud claims
2. Do pattern analysis to identify out of pattern transactions
3. Do link analysis to identify common threads in a claim/ across claims
4. Track new fraud trends in market and take preventive actions
5. Participate in Fraud Bureau
6. Do application seeding to check process robustness
7. Have better referral guidelines
8. Improve adherence to guidelines
9. Improve investigation
10. Train investigators
11. Have appropriate capacity
12. Reduce cost of investigations

Case study: Reduce hospital readmissions

How can we reduce a hospital's patient readmission rate? It is important to reduce readmissions as it improves the health outcomes, patient experience and reduces health costs.

Industry Research

- A hospital readmission is recorded when a patient is admitted to a hospital within a specified time period (usually 30 days) after being discharged from initial hospitalization
- Almost 20 percent of hospitalized patients are readmitted within 30 days, of which over half (13 percent) are potentially avoidable
- Hospital readmissions are costly and frequently occur soon after discharge. Estimates of the total cost of readmissions range from $15 billion to $25 billion per year
- Excess readmissions are measured by a ratio, by dividing a hospital's number of "predicted" 30-day readmissions by the number that would be "expected," based on an average hospital with similar patients. A ratio greater than 1 indicates excess readmissions
    - **For the purpose of this case, you can assume that you have to reduce the Congestive Heart Failure and COPD readmission rate by 10% points each.**
- CMS (Centre for Medicare Services) started to impose penalties owing to hospital readmissions. It started with 1% penalty on the hospital payments effective 2012 rising to maximum 3% in 2021

Industry Research

Disease	Percentage of Readmission
Congestive heart failure	24.5%
Septicaemia	21.3%
COPD	21.5%
Pneumonia	17.9%

- Congestive heart failures have the maximum readmission rate ~25%
- Readmission rates were constant between 2007 and 2011, approximately 19 percent
- To accurately compare hospital performance fair, the 30-day readmission rates adjust for patient characteristics that may make death or unplanned readmission more likely, even if the hospital provided higher quality of care

Question – What is the problem?

How can we reduce a hospital's patient readmission rate?

1 Background

- -

2 Desired outcome

- --

3 Scope

- ---.

4 Constraints

- --

5 Stakeholders

- --

6 Resources

- ---

Question - How can we reduce a hospital's patient readmission rate?

How can we reduce a hospital's patient readmission rate?

1 Background

- Preventable readmissions to hospital are frequent, costly, and demanding on healthcare resources
- It has negative health outcome and patient experience
- Readmission rate is for this hospital is higher than benchmark

2 Desired outcome

- To reduce the 30-day patient readmission rate by X%

3 Scope

- Identify measures to reduce preventable readmissions in this hospital
- Implementation of measures is not in scope
- Congestive Heart Failure and COPD readmission

4 Constraints

- Cost of providing care cannot increase by more than 5%

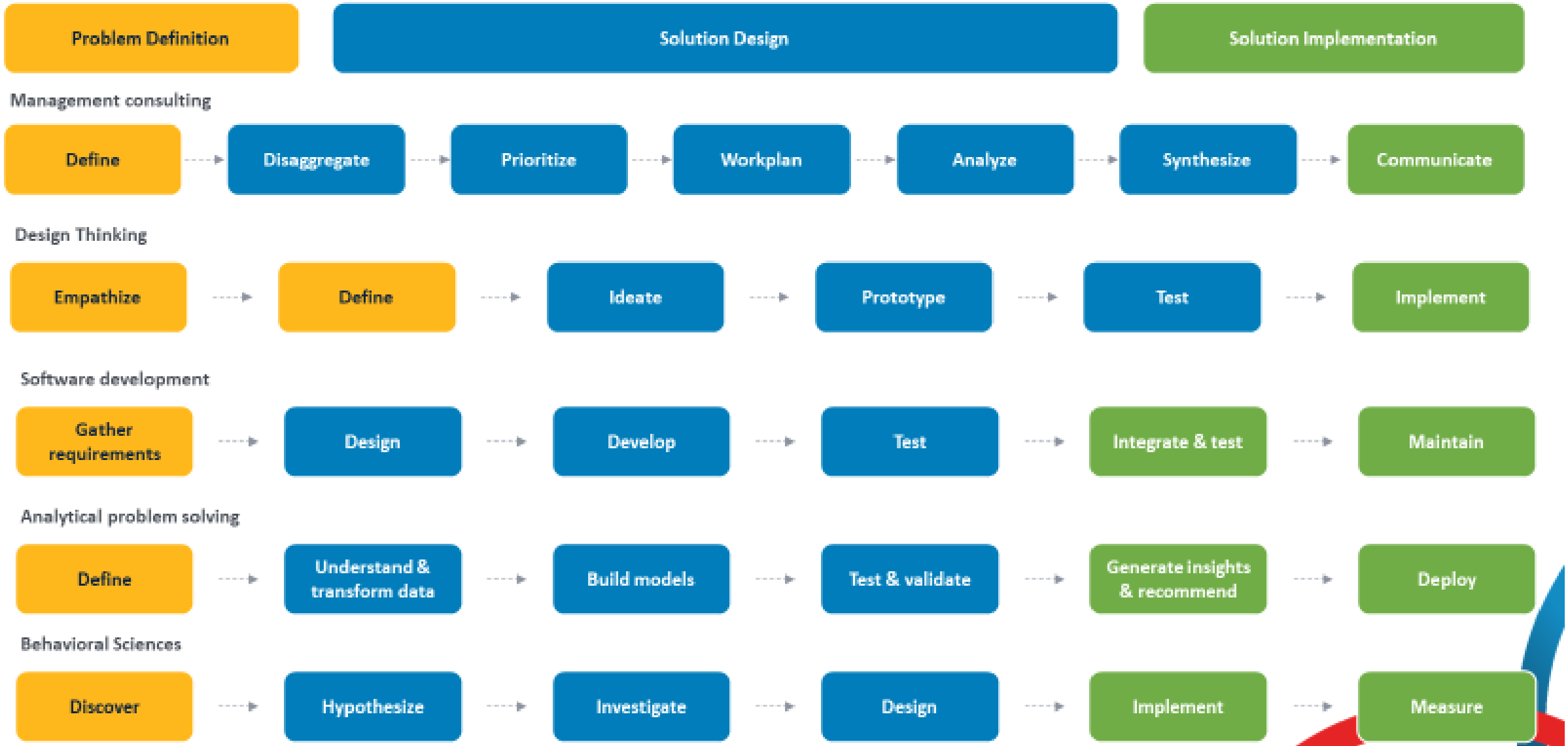
5 Stakeholders

- Hospitals
- Patients
- Doctors
- Support Staff

6 Resources

- Inpatient /discharge data
- Patient reports
- Facilities data

Problem solving approaches



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