

NEXT GENERATION OF INTERNAL AUDIT

HOW WILL INTERNAL AUDIT ADAPT WITH THE FUTURE

PRESENTED BY:

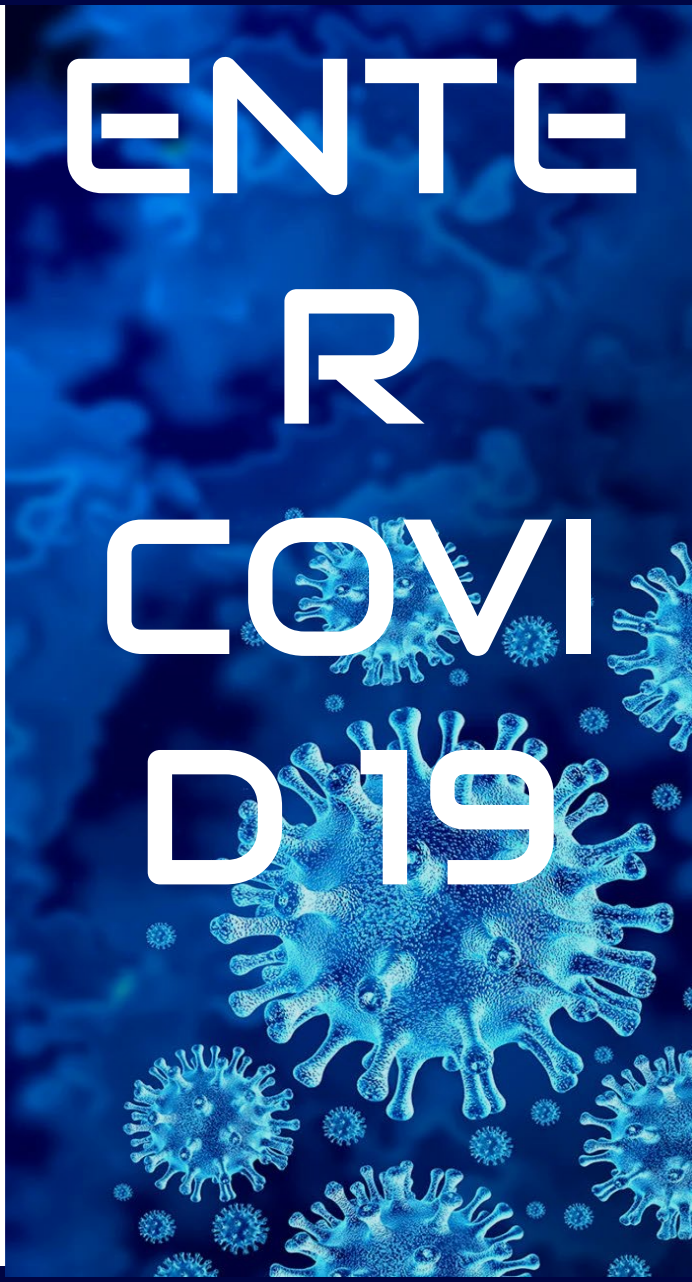
ANTONIUS GUNADI

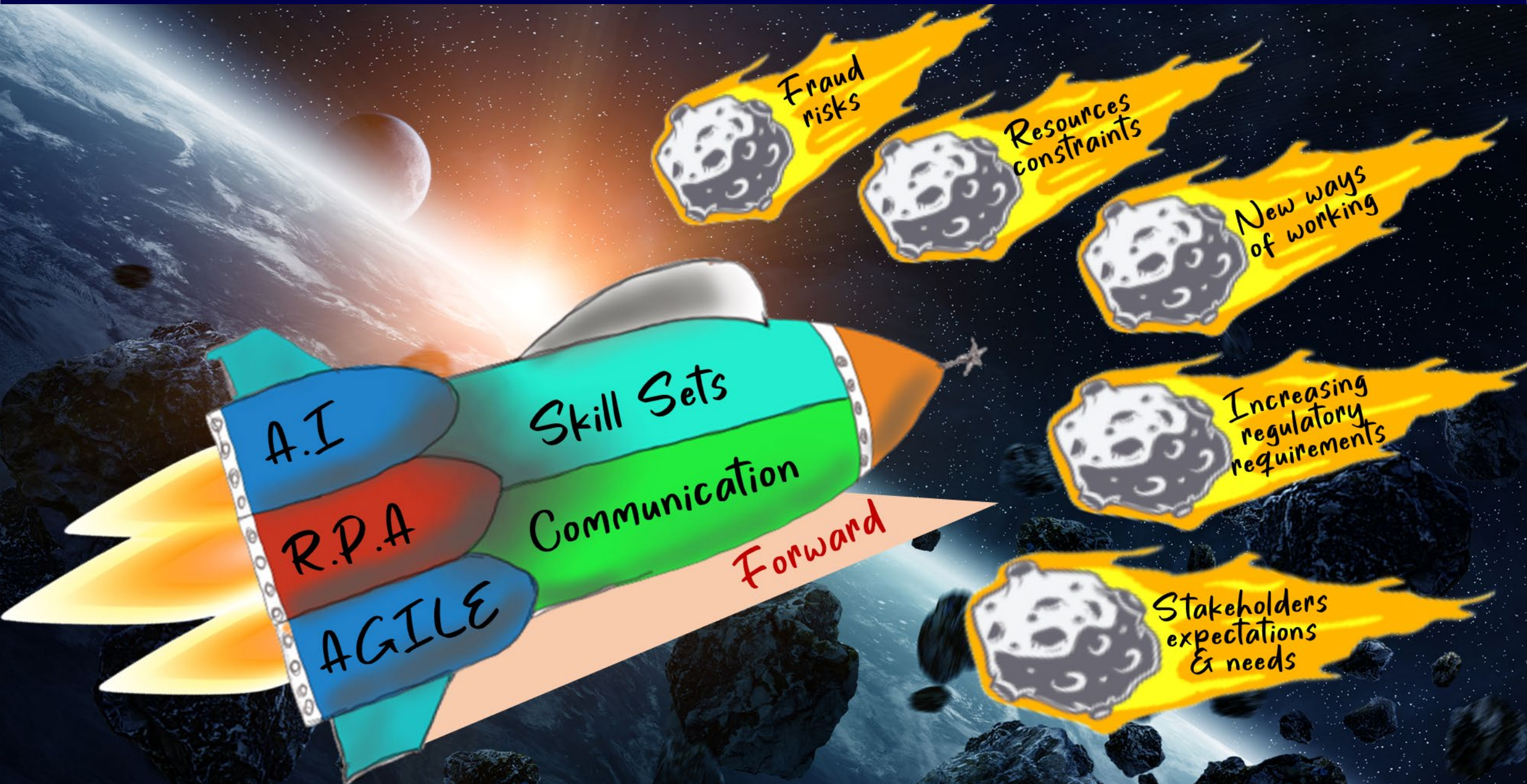
CHIEF AUDIT EXECUTIVE CIMB NIAGA AND CHAIRMAN OF IKATAN AUDITOR INTERN

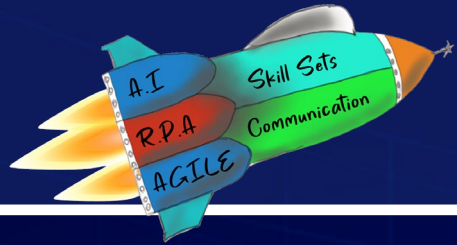
Evolution of Internal Audit



Source: Gartner
734504_C







Integration of A.I. into Audit Works



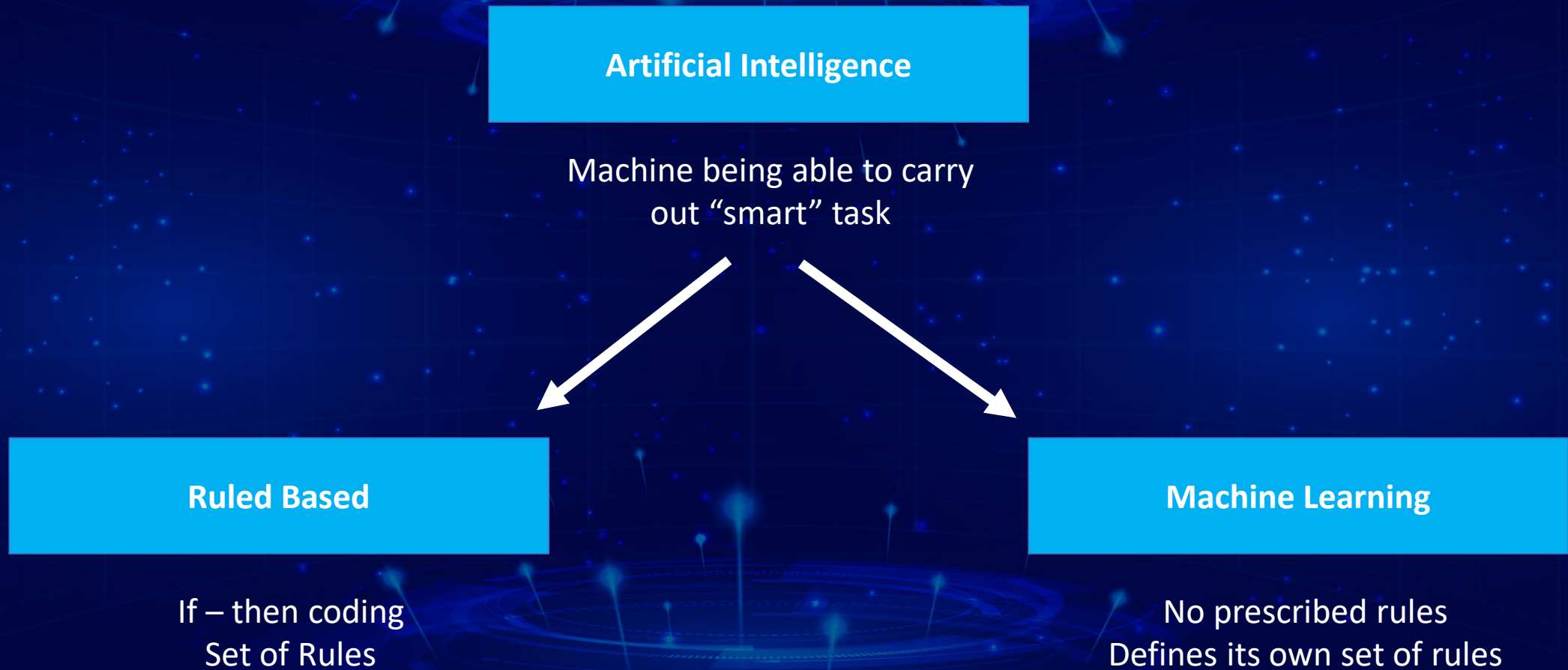
Which one is better statement about an audit of 1 million transactions?

A) 5 out of 30 samples are incorrectly recorded (16%)

B) 5 out of 1 million transactions are incorrectly recorded (0,005%)

- Sample basis vs. big data: is taking 30 samples enough to represent 1 million transactions?
- Time required to do the audit
- Uncovering hidden facts and insights

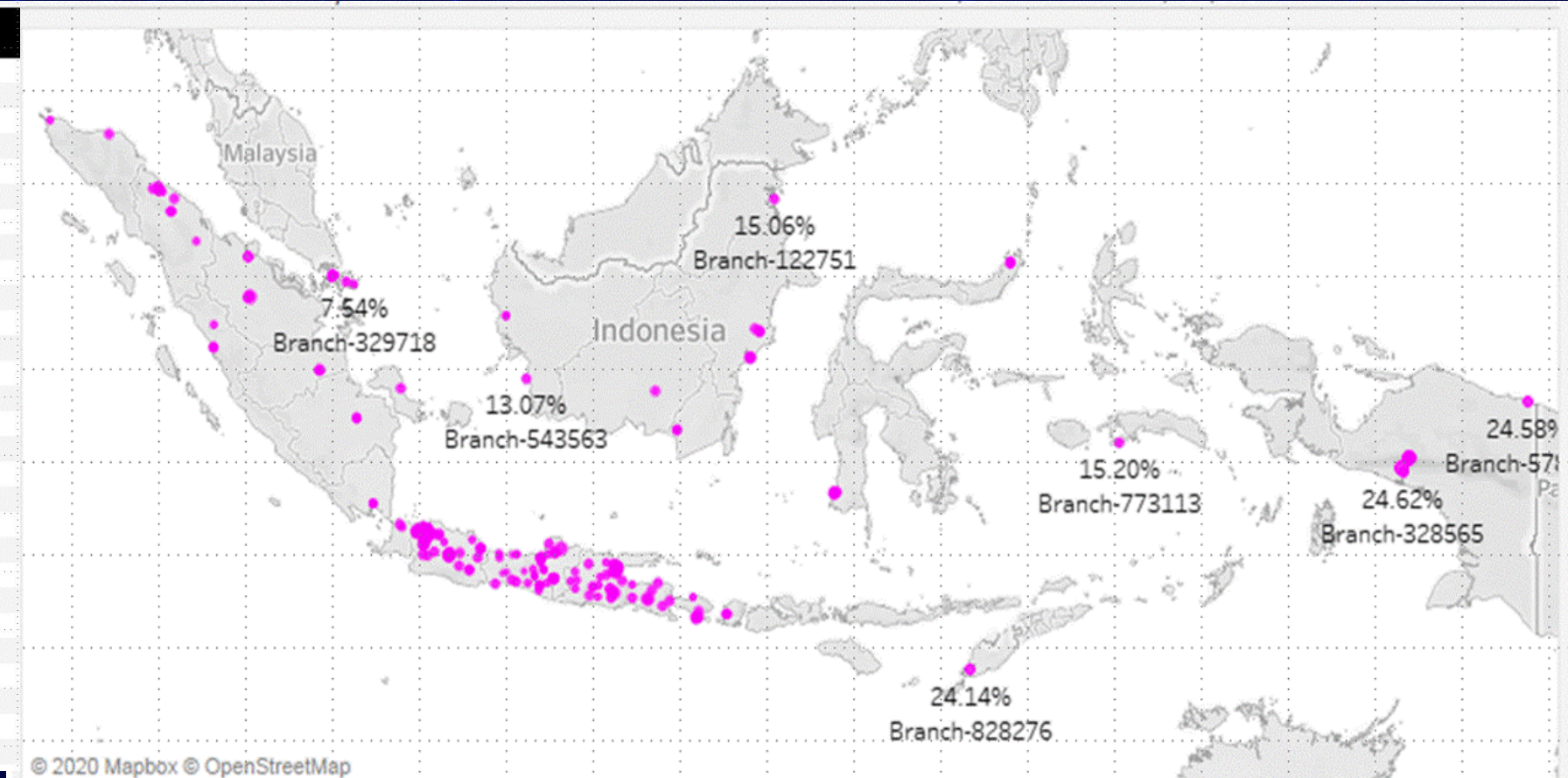
100% A.I.
AUDIT?



Rule – Based Use Case:

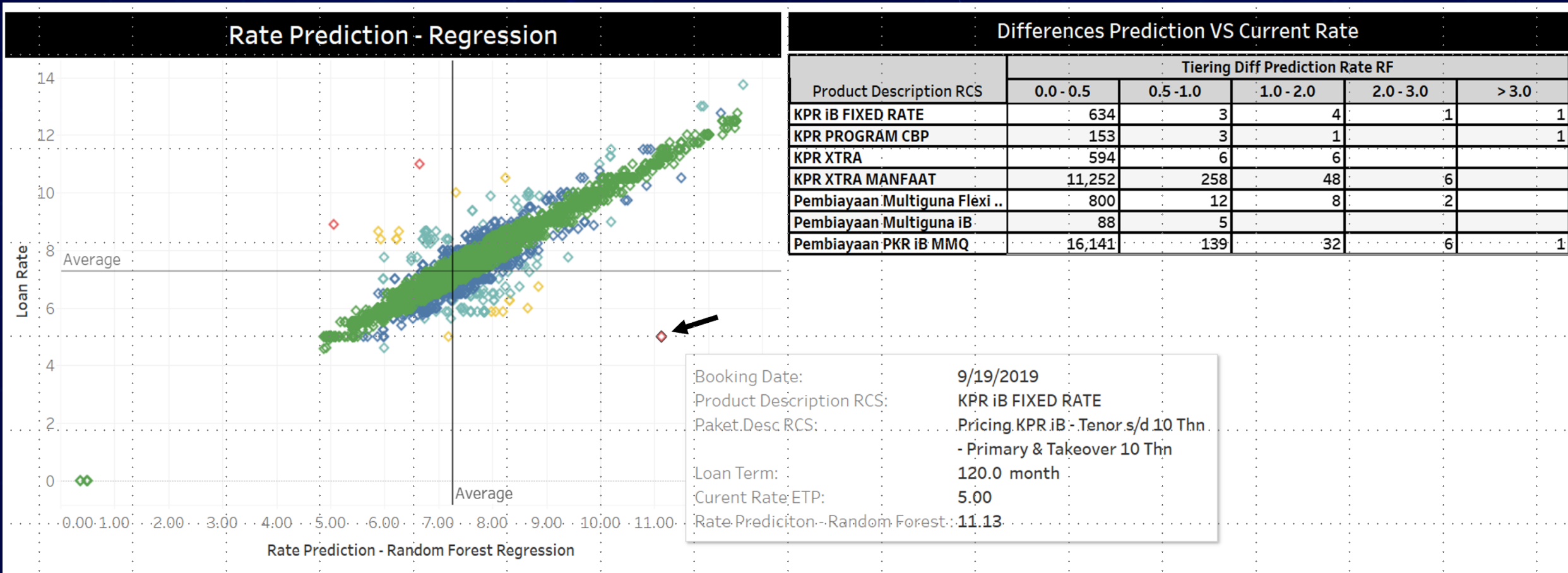
Nation wide dashboard for 400+ branches

Branch Name	Ratio Alert By Branch	Alert Branch
Branch-776550	86.60%	116
Branch-206130	78.16%	805
Branch-973750	54.12%	88
Branch-833954	43.64%	114
Branch-913748	40.19%	125
Branch-441989	38.24%	9
Branch-549003	38.16%	1,387
Branch-859544	36.80%	872
Branch-60995	35.37%	896
Branch-635105	32.91%	138
Branch-719211	32.38%	1,014
Branch-691790	30.91%	45
Branch-638488	30.73%	44
Branch-257524	29.95%	21
Branch-733080	28.07%	500
Branch-395346	27.65%	168
Branch-849575	27.53%	1,212
Branch-651299	26.23%	83
Branch-273102	25.91%	104
Branch-645149	25.83%	3,203
Branch-410039	25.58%	113
Branch-388643	25.31%	4,268
Branch-163132	25.30%	49
Branch-335455	25.02%	160
Branch-796985	25.00%	0
Branch-343696	24.87%	32
Branch-328565	24.62%	576
Branch-544397	24.62%	86



M.L Use Case:

Regression Analysis – Predictive vs. Actual



CIMB NIAGA
 Dashboard

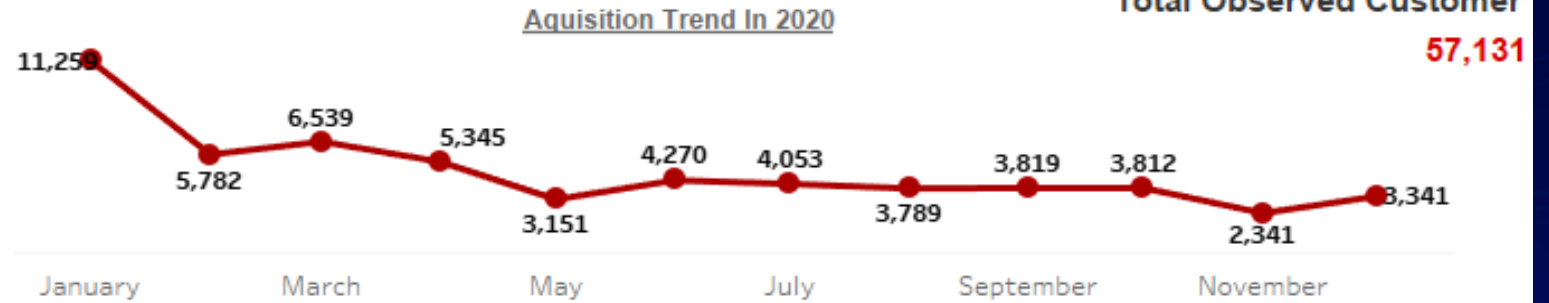
Predictive Analytic : Product X Customer Lifetime Value

Dummy Data

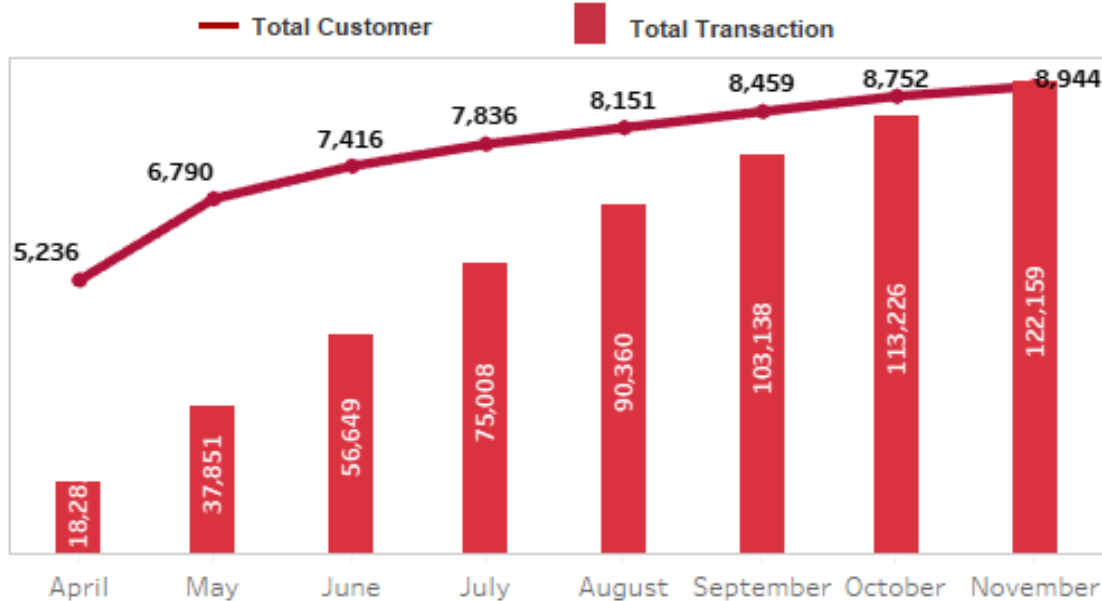
[Buy Till You Die]

Using customers' last transaction date (**recency**) and number of repeat transactions done (**frequency**), we estimate the **expected number of future transactions** each customer will do over a define time period.

*Observed data during Jan 2020 - Mar 2021



Cummulative Total Customer and Transaction by Valued Customer



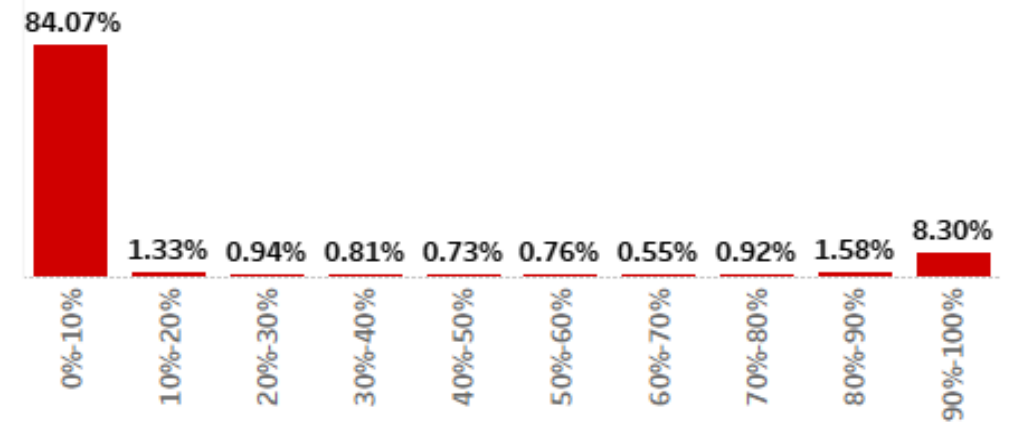
*Valued Customer: Probability > 80%

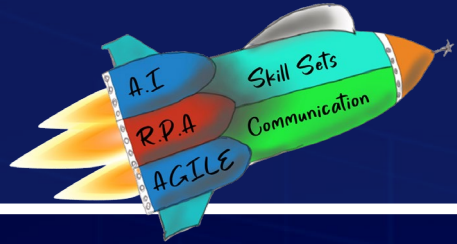
[2021]

Probability Customer Alive Distribution

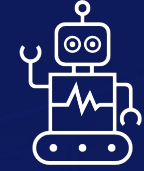
Based on Registration Month:

February 2020





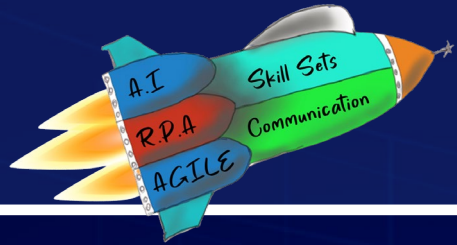
R.P.A = Automatic and Continuous



R.P.A. is all about improving the **EFFICIENCY** of the audit function

Areas for possible R.P.A:

- Internal Productivity MIS (audit hours spending analysis, audit statistic, e.t.c.)
- Management Action Plans Follow Up
- Scheduler/ Calendar Reminders
- Audit Planning (Risks Assessment)
- Audit Report



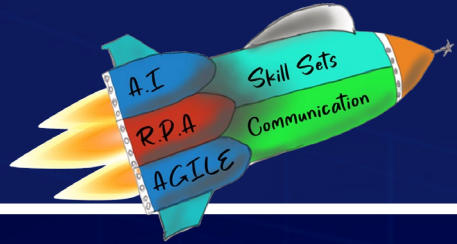
THINK AND ACT AGILE



ANNUAL AUDIT RISKS ASSESMENT AND PLANNING RISKS BASED AUDIT CYCLE

- Rapid changes
- Dynamic Stakeholders' Needs
- Resources allocation: What really matters for the business vs. cycle
- Speed of audit and issues resolution





COMPETENCY AND SKILLS



DIGITAL



CREATIVE SOCIAL



DIGITAL DEXTERITY



CYBER SECURITY



DATA LITERACY

NETWORKING

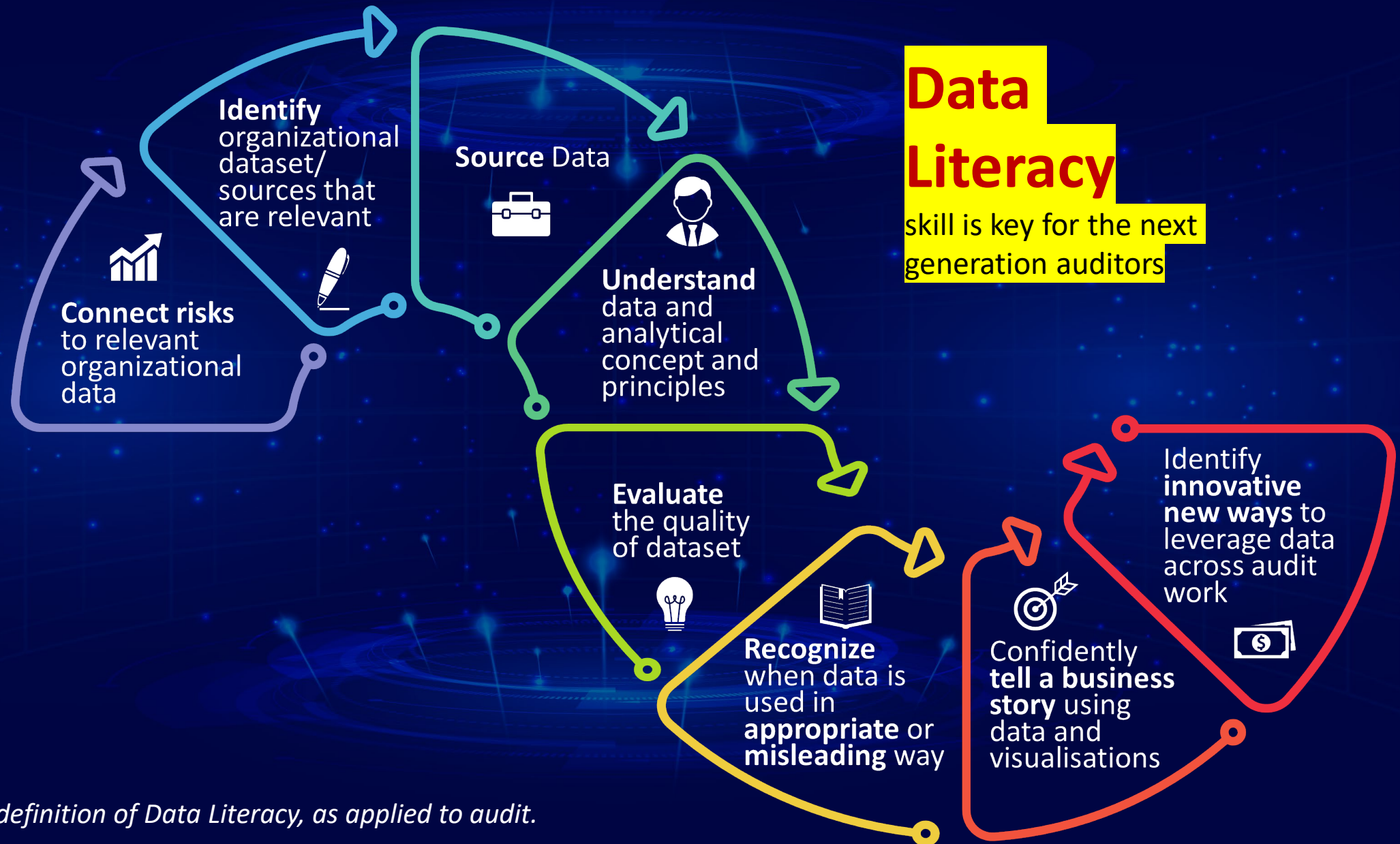


PROBLEM SOLVING



STORY TELLING

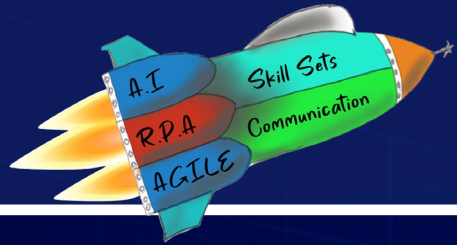




Source: Gartner definition of Data Literacy, as applied to audit.

Component of Data Literacy	Auditor 1	Auditor 2	Auditor 3	Auditor 4
Connect risks to relevant organization data	✓			✓
Identify organizational datasets/sources that are relevant		✓		
Source data			✓	
Understand data and analytical concepts and principles	✓		✓	
Evaluate the quality of dataset			✓	
Recognize when data is used in an inappropriate or misleading way		✓		
Confidently tell a relevant business story using data and visualizations		✓		✓
Identify innovative new ways to leverage data across audit work	✓			

Auditors are more likely to possess discrete data competencies than the total combination of these skills.

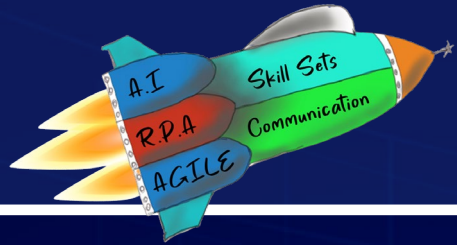


COMMUNICATION



AUDIT REPORT IS THE ~~MA~~ COMMUNICATION MEDIA FROM INTERNAL AUDITOR

- SEAT IN MANAGEMENT COMMITTEES
- MEETING MANAGEMENT AS OFTEN AS POSSIBLE (QUARTERLY BUSINESS MONITORING)
- KISS MINDSET (KEEP IT SHORT AND SIMPLE)
- FORWARD LOOKING & BUSINESS STORIES



CLOSING IDEAS



- NUMBER OF AUDITORS REQUIRED IN AN ORGANIZATION COULD BE DOWN BY 15 % WITHIN 5 YEARS; 25% WITHIN 10 YEARS
- DATA LITERACY IS THE FUNDAMENTAL SKILL
- WHILE NOT 100% AUDIT WILL BE IN THE FORM OF A.I., IT WILL PLAY A SIGNIFICANT ROLE
- CHECKLIST/ HISTORICAL REPORTING IS WAY OF THE PAST; FORWARD LOOKING AND BUSINESS INSIGHTS ARE WHERE AUDITOR CAN ADD VALUE

THANK YOU

PRESENTED BY:

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CHIEF AUDIT EXECUTIVE CIMB NIAGA AND CHAIRMAN OF IKATAN AUDITOR INTERN BANK INDONESIA 2020 - 2023