



VIRTUAL
SAS® GLOBAL FORUM 2021



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Midsize Banks and Credit Unions Level the Playing Field with AI and Advanced Analytics

Presented by Pegasus Knowledge Solutions, Inc.

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Midsized Banks and Credit Unions Level the Playing Field with AI and Advanced Analytics

Larry Hall

Director Client Engagement and AI Specialist

Larry Hall is Client Lead and Evangelist for the application of AI and Advanced Analytics in business. He has spent a career in the technology industry both as a user, developer, and promoter of advanced technology solutions to help solve companies' key business challenges.

Currently Larry serves as Client Engagement Lead and AI Specialist at PKSI, Inc. PKSI was founded in 1997 to help companies apply state-of-the-art advanced analytics technologies including AI and Machine Learning as a means of reducing costs, increasing revenue, and improving competitive position.

Pegasus Knowledge Solutions

The AI Experts



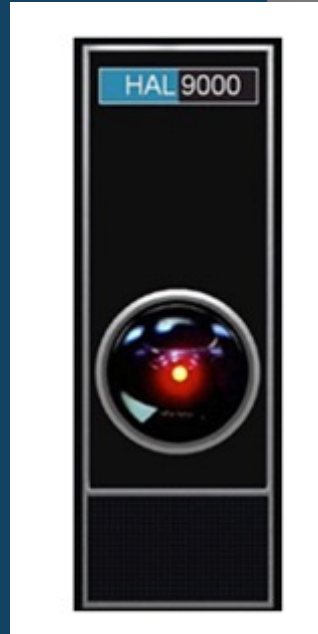
- ✓ SAS Gold Partner
- ✓ 2020 SAS Excellence in Innovation Award Winner
- ✓ PKSI Delivers Impactful AI
- ✓ 20 years of AI Expertise
- ✓ From Concept to Production
- ✓ Award Winning AI Solutions



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AI – Is it a Thing?



AI in Culture





AI – Is it a Thing?

AI in Research

AI – Is It a Thing?

AI in Business

**How Artificial Intelligence Will
Transform Business**

THE WALL STREET JOURNAL

**5 Reasons Why AI/ML Should Be
Top Of Mind In 2021**

Forbes

Artificial Intelligence Is Reshaping Finance

FINANCIAL TIMES

AI Defined

AI is... “The science and engineering of making intelligent machines”

John McCarthy

“**Artificial intelligence** (AI) refers to the simulation of **human intelligence** in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.”



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Machine Learning Defined

Machine learning is a subset of AI

Machine learning is an application of artificial intelligence that provides systems with the ability to automatically learn and improve from experience without being explicitly programmed.

Machine-learning algorithms use statistics to find patterns in massive amounts of data—numbers, words, images, clicks, what have you. If it can be digitally stored, it can be fed into a machine-learning algorithm.



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Driving Innovation with Machine Learning

Machine Learning Methods

1. Regression
2. Classification
3. Clustering
4. Dimensionality Reduction
5. Ensemble Methods
6. Neural Nets and Deep Learning
7. Transfer Learning
8. Reinforcement Learning
9. Natural Language Processing
10. Word Embeddings

"The goal is to turn data into information, and information into insight."

Carly Fiorina



"The goal is to turn data into information, and information into insight."

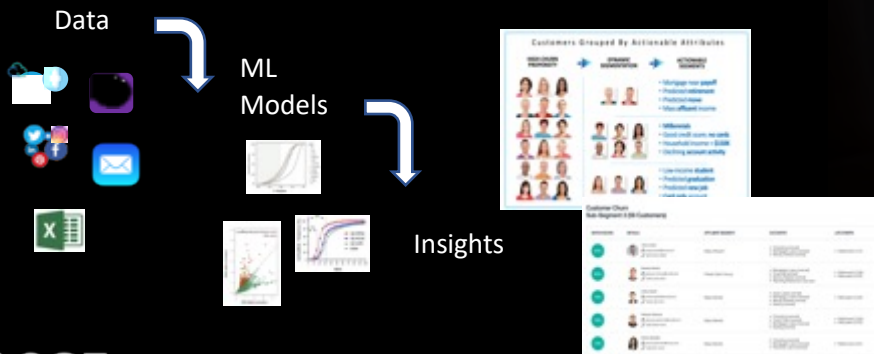
Carly Fiorina

What's it All Mean?

Reducing Customer/Member Churn

- The cost of acquiring a new customer or member can be 700% higher than retaining an existing customer
- Increasing retention by 5% can increase profits by 25% - 95%

Source: Bain & Company



From *The Economist's*
Global Banking Survey
2020

Banks are expected to spend **\$7.1 billion on AI in 2020**, growing to \$14.5 billion by 2024, on initiatives such as fraud analysis and investigation, *according to market research firm International Data Corp.*

66%

of bank executives believe new tech will drive their businesses for the next five years¹

77%

of bankers believe AI will be the most game changing of advanced technologies¹

2.5-5.2%

Impact on sales at banks deploying AI²

Source:
¹World Economic Forum
²McKinsey & Company

“Artificial intelligence will separate the winners from the losers in banking”

World Economic Forum

“Advanced analytics and artificial intelligence are becoming core differentiators, leading to lower costs and better customer experience delivery for players with the scale to make meaningful investments. These investments will result in increasingly sophisticated customer experiences, including personalized interactions and tailored value propositions, as well as significant opportunities for efficiency through automation. Leading banks are experimenting with use cases such as AI-powered chatbots, deep learning for signature analysis in fraud management, and dynamic next-product-to-buy models. And the scope of use cases is likely to expand dramatically over the next ten years.”

Source: McKinsey & Company *Six keys to success for U.S. Regional and mid-cap banks*

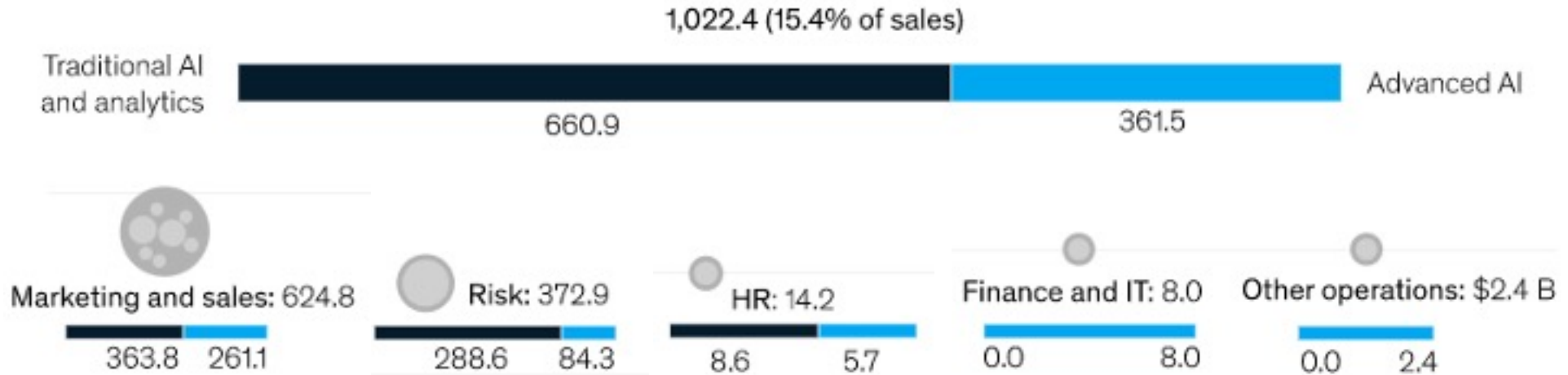
What Are The Experts saying?



Where's the Value

Potential annual value of AI and analytics for global banking could reach as high as \$1 trillion.

Total potential annual value, \$ billion



Source: McKinsey & Company *The executive's AI playbook*

Where's the Value

Reducing Costs and Increasing Revenue

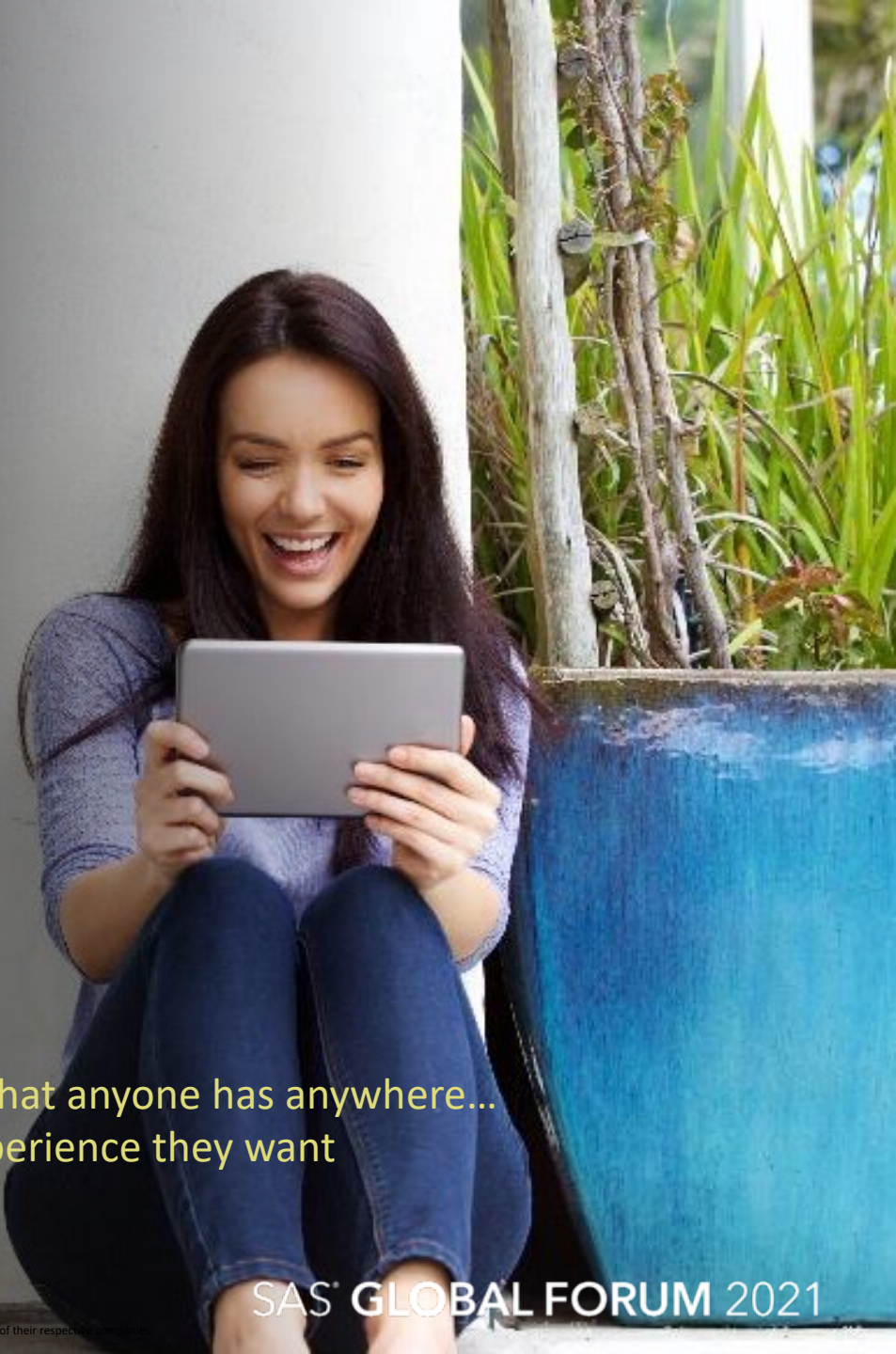
JP Morgan saves 36,000 hours of lawyer and loan officer work annually

Financial Services executives found that investment in AI helped them reduce production costs by 13%

Executives reported a 17% average revenue increase in the area of their AI initiatives

AI use increased mortgage collections by over 30%

Sources: TCS Research



COVID accelerated changes to customer / member experience

- Customers are demanding a more personalized and proactive experience
- Speed and simplicity rule the customer experience race
- Customer impatience with sub-par CX grows

Source: The Financial Brand

“The last best experience that anyone has anywhere... becomes the minimum experience they want everywhere.”

The Changing Expectations of Customers and Members



Know Me
Deep Analytics



Ask Me
Deep Analytics



Advise Me
Deep Analytics



Compare Me
Deep Analytics



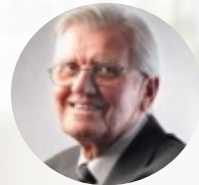
Excite Me
Deep Analytics



Alert Me
Deep Analytics



Protect Me
Deep Analytics



Stick with Me
Deep Analytics



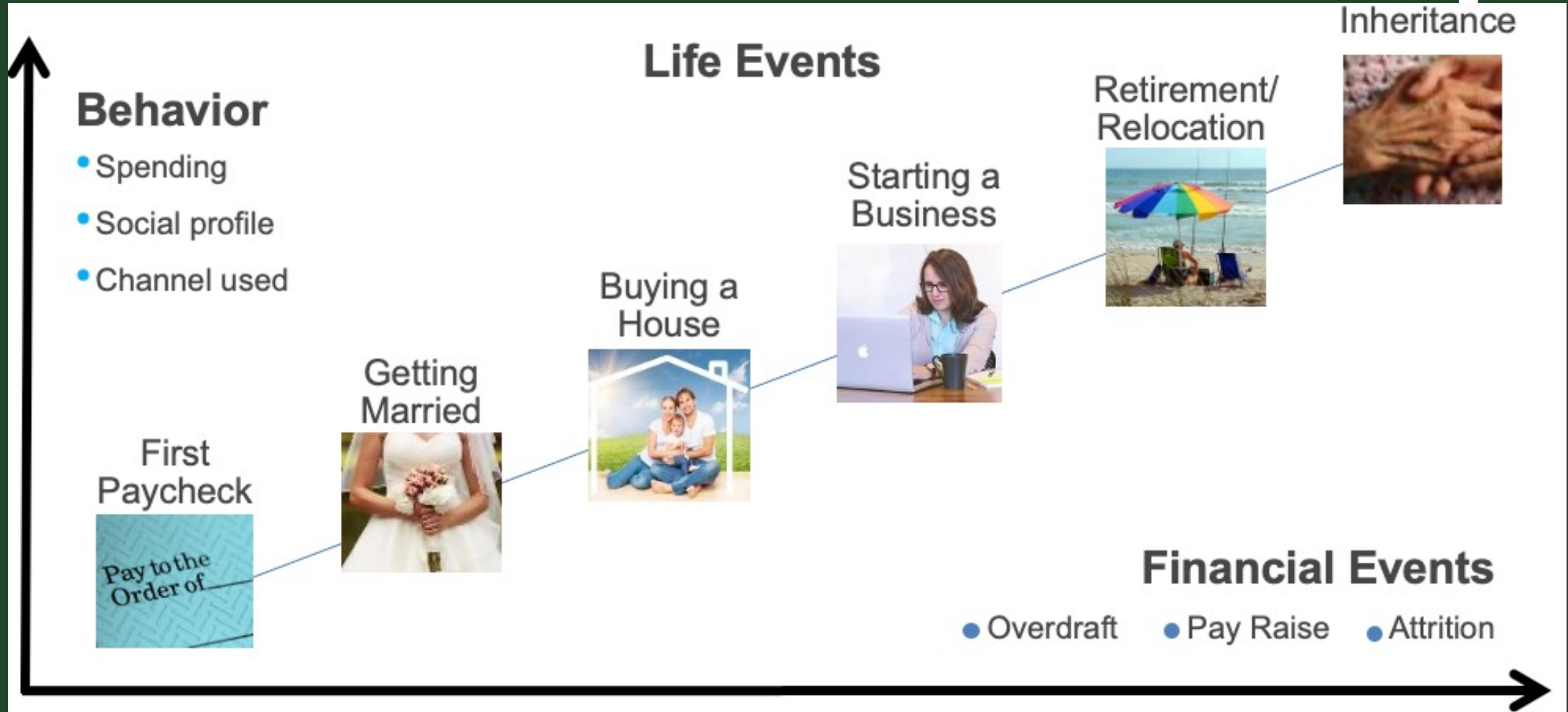
Find Me
Deep Analytics

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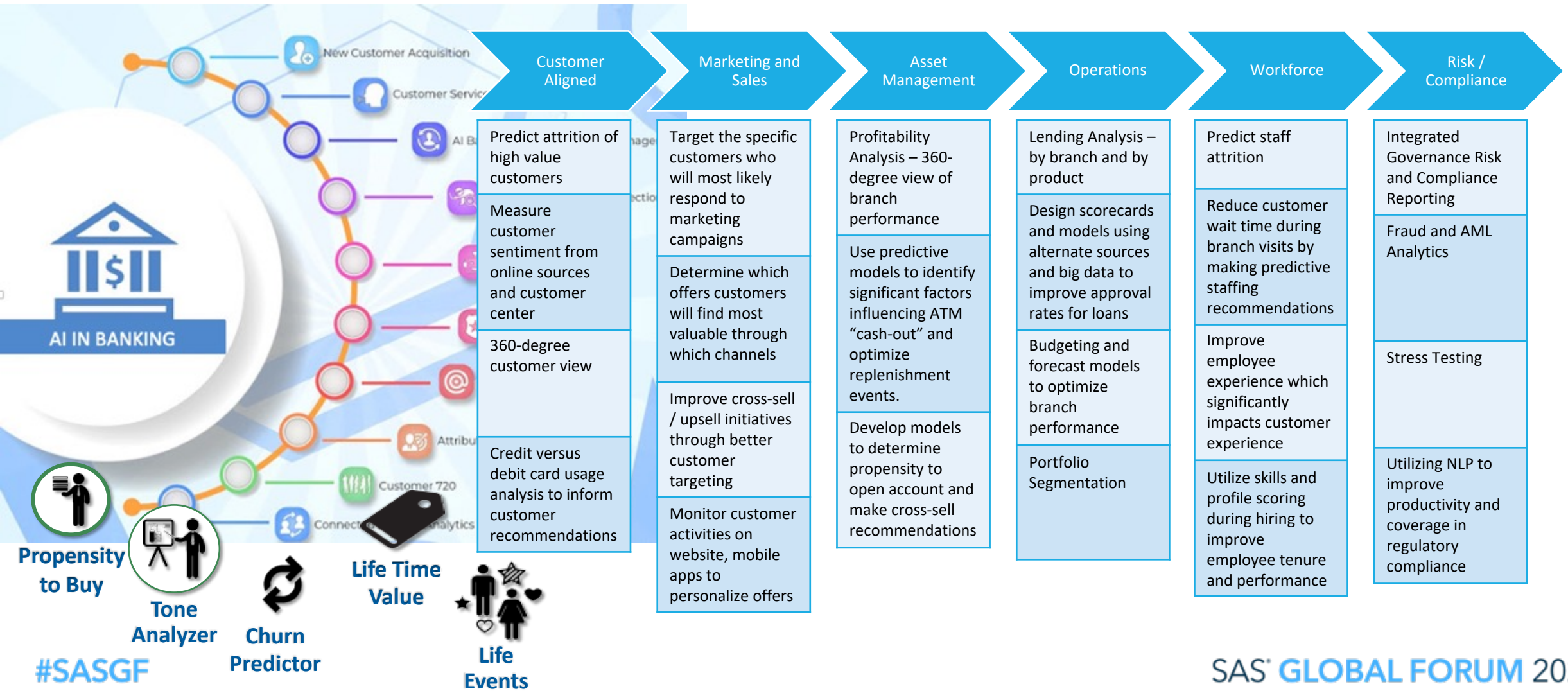
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Predictions

- Proactive Customer/Member Experience



Banking/Credit Union Analytics Across the Enterprise



- ✓ **Skills and resources are lacking** at many firms to develop advanced analytics in house.
- ✓ **AI and Data Science skills** are hard to find and expensive to maintain. And AI technology is a rapidly changing field.
- ✓ **Data** is scattered across silos making meaningful, integrated analytics a challenge.
- ✓ **Fintechs and large Banks** are using AI and Data Science to Competitive Advantage

AI Challenges

Big Banks Are Investing in AI



Royal Bank Of Canada Bets Big On Artificial Intelligence

Forbes



TD Bank Acquires Toronto-Based AI Startup Layer 6

THE WALL STREET JOURNAL.





How Do Midsized Companies Do It? ... Find a Partner

“The bottom line is, if you’re in a mid-sized company you have unique needs. You’re big enough to need a comprehensive solution but not so large that you can build a solution in-house. One powerful way forward is to enlist the help of an outside expert in workforce analytics. **Partner with an expert and you can accelerate to new levels of insight, influence and action.**”

Karen O’Leonard of Bersin by Deloitte

Keys to Success

... How a Partner Helps

- **Out of the box advanced analytics** – pre-packaged key metrics and analytics at your fingertips. Providing click-of-a-button access to metrics and insights on operations, risk, and customer behavior.
- **Connections across data sources** – your workforce analytics partner does all the heavy lifting to seamlessly connect data across sources.
- **Lower cost, quicker time to value, and agility** – domain and technical expertise combined with years of experience delivers solutions faster.
- **Ongoing expertise and guidance** – delivering advice and expertise on how to best address business questions with data and analytics.



Advanced Financial Services Analytics

A Portfolio of Solutions to Grow With
Built on AI/ML

Building the foundation for agile data driven
decision making:

Use Cases

Data and Model Management

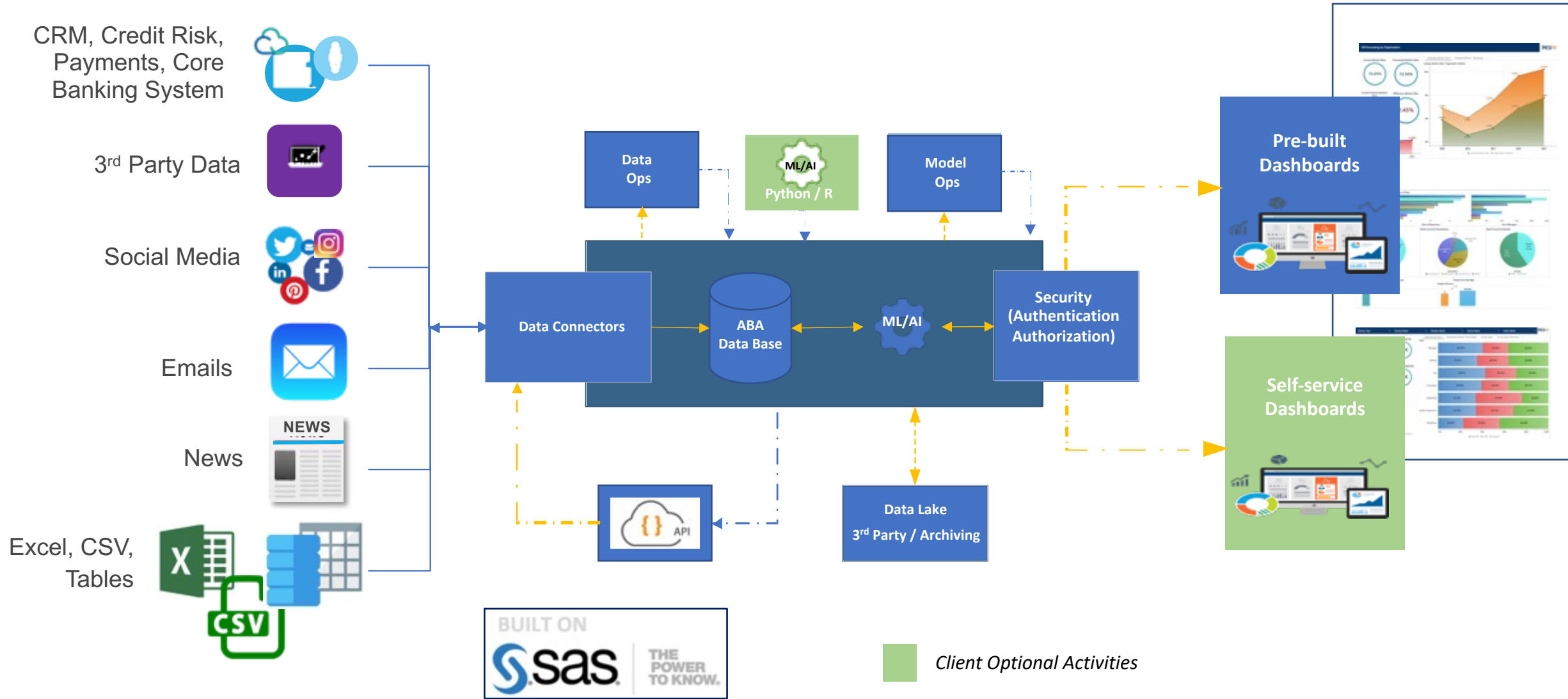
Visualizations



“When partnering with an analytics provider it’s key that the relationship is collaborative. It should never be a typical software-buy where you plug-and-play and only reconnect with the provider at renewal time or when you need support.”

Karen O’Leonard

Building an Advanced Analytics Platform for Midsize Banks & Credit Unions



Filters: No selections



Customers & Account Distribution | Historical Customer Churn | Customer Churn Metrics | Ch >

Customers and Accounts Distribution



New Customers Since 90days
3.2% | 504

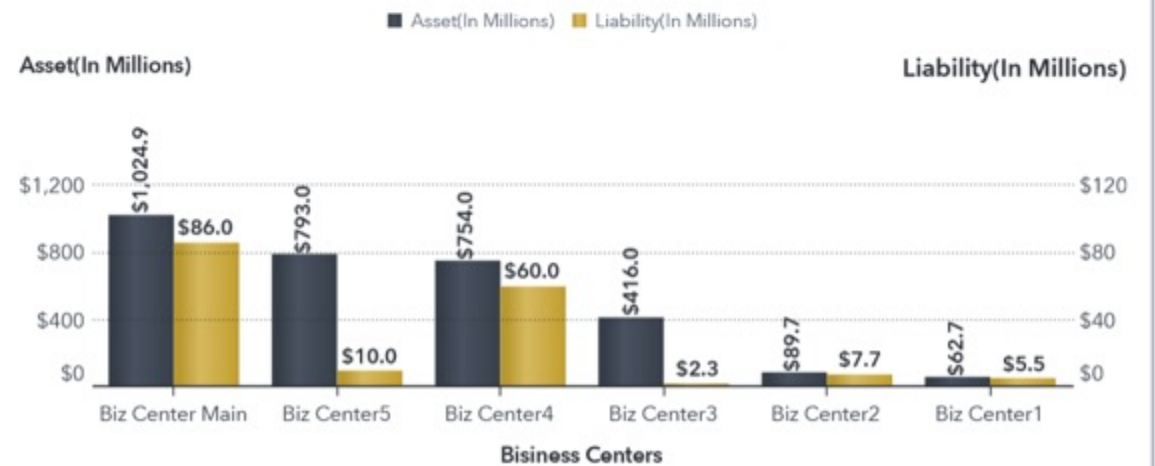
New Accounts Since 90days
6.2% | 1,040

Operations Overview

Bank's Focus Area



Branch Assets vs. Liability



No selections applied

360 Degree View



Customer ID

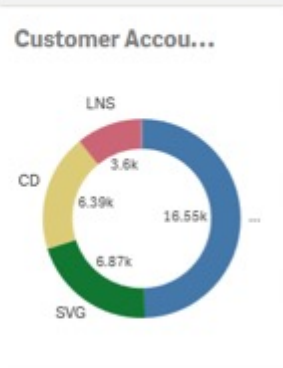
Paul Adams

100, 100 Main St
Chicago, IL 60607
55-555-5555
p.adams@pkst.com

100 Account Holder
100, 100 Main St
Chicago, IL 60607

Sentim...

Avg Life Time Value (\$)
208M



DDA Account Balance	\$393,253,930
SVG Account Balance \$	43.78M
Loan Balance \$	235.8k
CD Account Balance \$	104.6M

Assets	\$437,037 K
Liability	\$235,803
Avg Household Earnings \$	300k
Churn Probabilty	No

He Might be Interested in
Click on the product to create opportunity

- Locker Facility**
Locker Type
- Life Insurance**
Insurance Type
- Credit Card**
Credit Card type

He Might not Know about

- Locker Facility Taken**
He took locker facility on 19 feb,2016
- Life Insurance Premium Category**
He might not be interested in this facility or he might be interested in silver category
- Credit Card Platinum Category**
He didn't apply for platinum category
Applying this card will give him \$500 bonus

Frequently Spends On

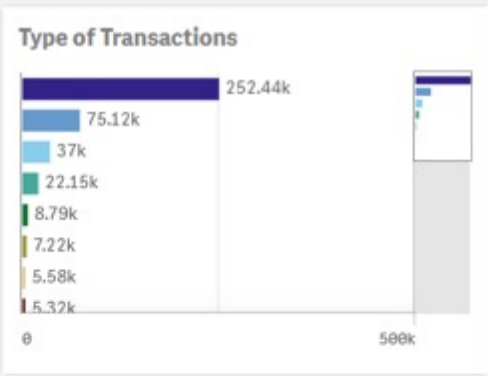
- Health Care
- Gadgets
- Shopping

Customer Engagement Sc...

85

Upcoming Events

27th April
Paul has his birthday



Most Visited Website

- expedia.com
- ebay.com
- walmart.com
- amazon.com

Conversation Starters

- Checkbook Request**
He Might interested in this facility
- Locker Facility Request**
He Might not interested in this facility
- Stop Payment Request**
He Might not interested in this facility
- New Account Opening Request**
He Might interested in this facility

Recently Bought

- Certificate of Deposits
- Car Loan
- House Loan

Card Usage
Used in more than 4 countries

- UK
- USA
- CANADA
- MEXICO

Last 10 Transactions

Date	Amount	Description
2016-11-02	\$203.00	*1 PRAIRIE MEADOW **** ALTOONA IA ***** 613299 11-01-16 15:50:38, [5307]
2016-11-02	\$23.00	*1 PRAIRIE MEADOW **** ALTOONA IA ***** 613299 11-02-16 00:00:07, [3401]
2016-11-02	\$83.00	*1 PRAIRIE MEADOW **** ALTOONA IA ***** 613299

House Hold Relationship

House Hold	First Name	Last Name	Earnings	Average Income	Average Household Incorr...
HH-35...	ABEIRMC L	ABEIRMC L	\$338,402	\$0	0
HH-35...	NASLOHDT ECIWURF	NASLOHDT ECIWURF	\$338,402	\$0	0

Client 360 Dashboard



In Summary...

- Overwhelmingly financial institutions see AI as key to success going forward
- The value of AI has been proven to be significant
- AI can help mid-sized firms level the playing field
- Connecting with a partner is the secret for mid-sized banks and credit unions to make AI a part of their business

Learn More About the PKSI Advanced Financial Services Analytics Platform



The screenshot shows the PKSI website header with the logo and navigation menu. The main content area features the title "Advanced Banking Analytics" and a video player. The video player shows a thumbnail with the text "PEGASUS KNOWLEDGE SOLUTIONS Advanced Banking Analytics Integrates core banking data with data from other systems".

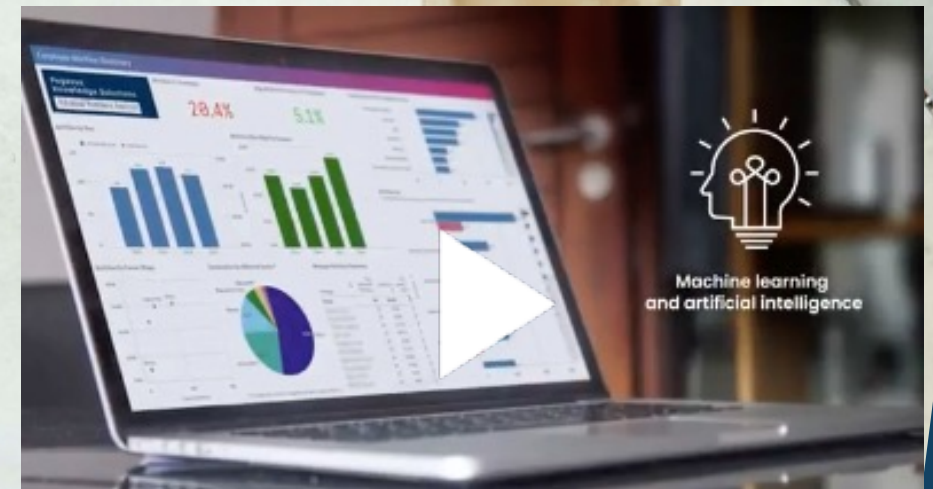
Advanced Banking Analytics

Commercial and Consumer Banking Institutions are harnessing the power of Advanced Analytics today to address business challenges including **Customer Retention**, pinpointing customers for **targeted marketing**, predicting **loan defaults**, gauging **customer sentiment** including social media, and optimizing ATM operations. Customers have a vast array of choices today, resulting in increasing acquisition and retention costs. Satisfied customers translate to higher revenue hence retaining customer loyalty and providing a positive customer experience is critical to a bank's growth.

We can assist banks quickly grow, rise productivity and profits, and increase operations to reduce overall risks.

<https://www.pksi.com/products/aba/>

[PKSI ABA Overview Video](#)



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Thank you!

Contact Information

Larry Hall
AI Specialist
PKSI



LinkedIn

<http://www.linkedin.com/in/lawrence-hall-ai>



Email

lhall@pski.com



Phone

847-651-7732

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