



# Business Intelligence 101 for the *Mid-Market*

How to Achieve Real-Time, Centralized Reporting with Power BI (or Tableau)

# What We Will Cover

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- Where to begin to enable effective BI/Analytics in your organization
- How to centralize reporting across various operational systems (CRM, ERP, Helpdesk, E-Commerce, Marketing, etc.)
- Benefits that can be achieved beyond dashboards and visualizations
- Common themes we hear across our mid-market customers that are looking to get started
- Case Study from a recent BI deployment at Rekor Systems to demonstrate the above

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# Introductions

SC&H & REKOR SYSTEMS

# Leading Today's Conversation



**Nick Scott**  
DIRECTOR - DATA ANALYTICS  
SC&H GROUP



**Bernie Schott**  
DIRECTOR, FP&A  
REKOR SYSTEMS



Presented by:  
Bernie Schott, Director, Financial Planning & Analysis

Rekor, a NASDAQ listed company (REKR), bridges commercial and government sectors with actionable, real-time roadway intelligence to enable faster, better, and more informed decisions with greater outcomes.



### Historical Success

24-year history of providing unparalleled partner support to successfully facilitate businesses and agencies in achieving their goals. Hyundai utilizes Rekor's technology to check for status recall status via owner's phone.

### Better Technology

AI-driven license plate and vehicle recognition provides unparalleled performance and capability. Mastercard has partnered with Rekor to enhance the drive-thru and curbside pickup experience at QSRs such as White Castle.

### Global Footprint

Rekor's vehicle recognition software operates in more than 70 countries on over 9,000 lanes of traffic. VeroGo uses Rekor's technology in Brazil to reward customers and improve the retail shopping experience.



# Who We Are

Founded in 1991, SC&H Group is a management consulting firm advising leading companies on accounting, tax, profitability and business process solutions that deliver exceptional business results. The professionals of SC&H Group assist and advise companies throughout every phase of their business lifecycle.

## Expertise Beyond the Numbers

With more than 280 employees, SC&H Group offers a broad range of services to clients of all sizes nationwide.

Our strong client relationships are evident through the multiple services and repeat engagements we perform for the majority of our clients.

SC&H is committed to being a leader through our techniques and tools and by recruiting/retaining the highest quality professionals. Our performance is evidenced by the following industry awards and acknowledgements.

## Our Proudest Achievements



# Our Goal - Enabling a Data-Driven Culture



## **DATA STRATEGY**

We advise clients on the best methods to collect, combine, and analyze financial, operational, sales, marketing, and other data. We also show organizations how to utilize business intelligence tools to transform and embolden decision-making and achieve their strategic goals.

## **DATA MODELING**

Our architect data models combine data from multiple sources into the simplest possible form to support analytics.

## **DATA VISUALIZATION**

We implement tools that enable organizations to visualize their results and data for the most immediate, appealing, and useful reports that serve your goals.

# Utilizing the Right Analytics Platform(s)

## Visualization and Analysis



## Data Sources and Transformation





# Common Themes, Trends and Challenges

# Themes and Trends Surrounding Data, BI and Analytics



Organizations embracing better usage of data is a hard trend and competitive advantage



Price point of leading Analytic platforms are not a barrier



Executive leadership teams requiring organizational metrics for performance measurement with increased frequency



Goals of reducing mundane, error-prone tasks and enabling resources to analyze vs compile



Reducing license cost for data consumers from multiple operational systems that produce reports in a silo

# Sounds Amazing – What is Holding Organizations Back?

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- Organizations believe they are too small or not sophisticated enough to take advantage
- Thinking there are too many sources of data, which are not clean enough
- Misconception that BI platforms are only used for “sexy” charts and graphs
- Questions around what BI platform to choose
- Belief they do not have the resources to support and scale capabilities for the future
- Uncertainty on where to get started

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# Approaches to Achieve the Goal

CENTRALIZED AND IMPACTFUL BI REPORTING/ANALYTICS

# Two General Approaches for Centralized Reporting

## Direct Connection and Self-Service Analytics

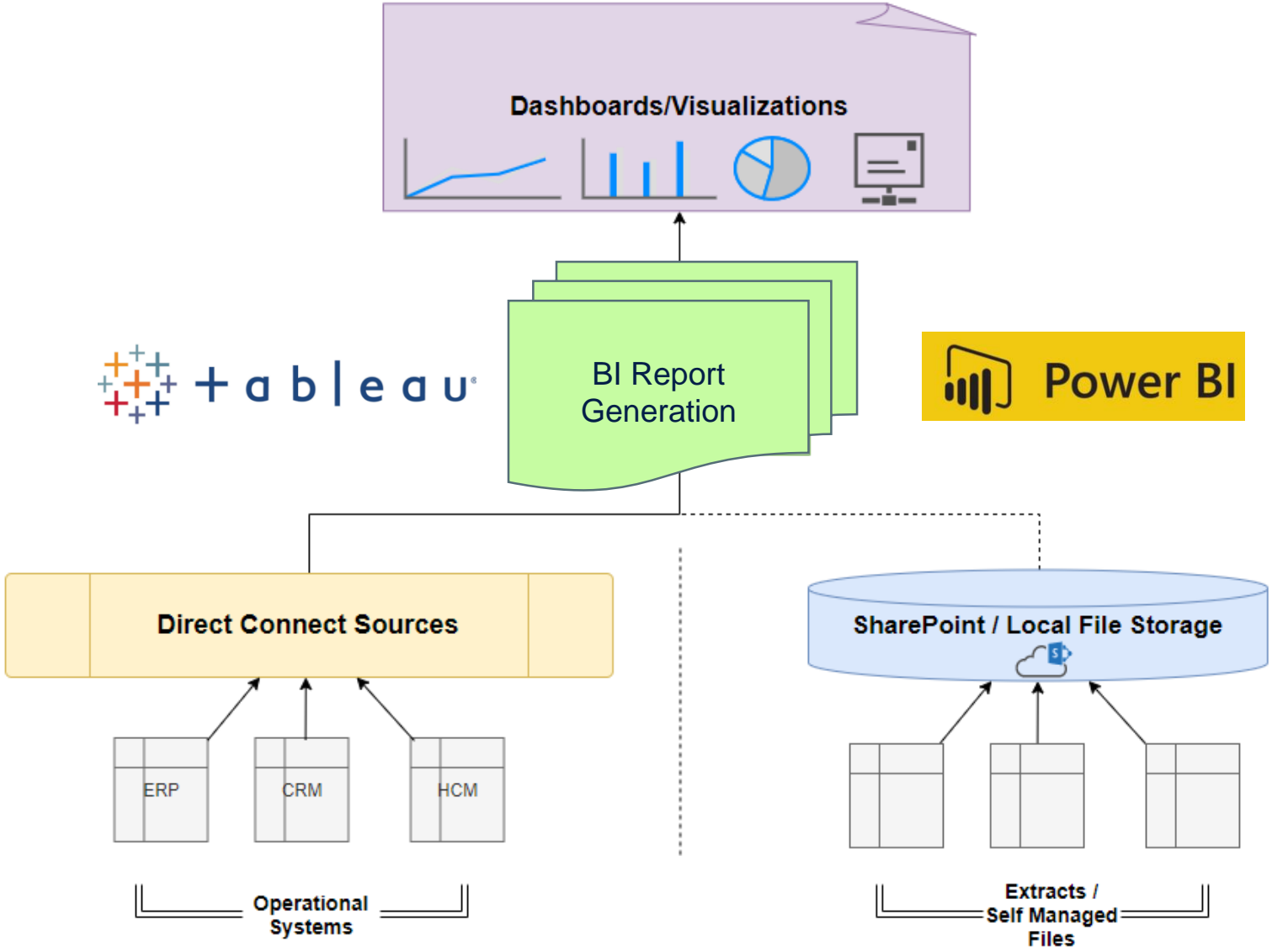
- Source systems are relatively clean and query-ready:
  - Most cloud-based platforms (Salesforce, Dynamics, HubSpot, etc.)
  - SQL based sources (homegrown or proprietary ERPs)
- Usage of file-based data sources is acceptable to augment source systems
- Data refresh is not impactful to performance of source systems
- Reporting users and/or source system owners can maintain metadata integrity necessary for consistent reporting
  - Using centralized and standardized SharePoint files is a common technique

*This is the sweet spot for most clients to get started*

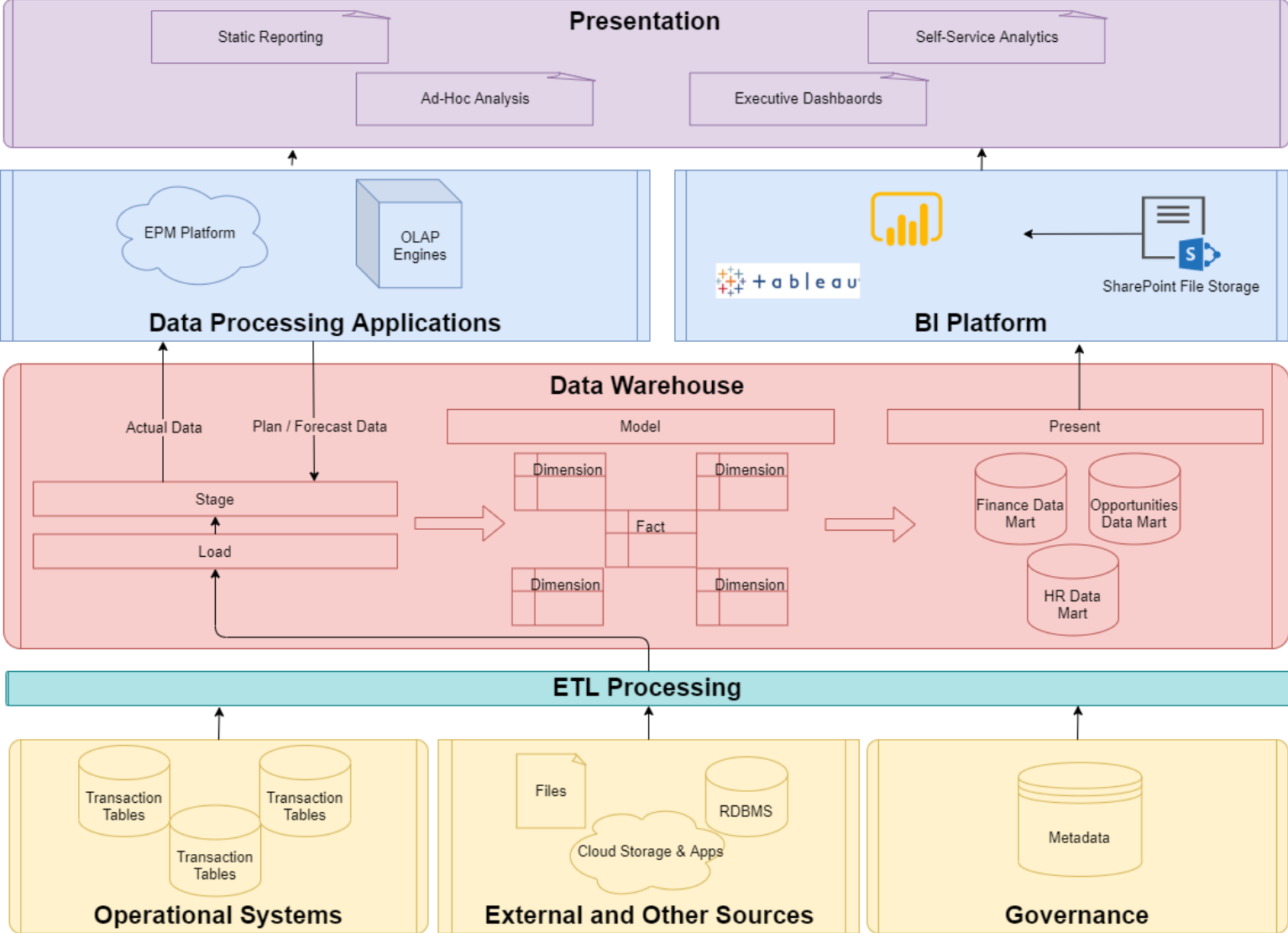
## Enterprise Data Warehouse, BI and Analytics

- Large volume of transactional source data which is not suitable for direct query
  - Legacy on-premises ERP's
  - Homegrown data processing applications
- Large volume of users that require views that extend across source systems
- Complex integration and transformation of source data to meet analytical needs
- Infrastructure and database teams available for support
- Ability to tune performance across query/transformation/reporting
- Inherited metadata consistency across business segments
- Will provide the ultimate single source of truth but can take months/years to achieve

# Direct Connect Operating Model



# Enterprise Reporting Operating Model



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# Rekor's Approach and Takeaways for Your Organization



# Rekor – What Drove a BI Initiative



## Business Requirements

- Executive leadership made strategic decisions to pivot the organization's core focus from manufacturing/services to generating revenue via software subscriptions of their proprietary AI platform.
- As part of this transition, the organization made investments in technology platforms and processes to support their rapid growth.
- While these various platforms met the needs of their various business functions, generating comprehensive, timely and accurate reporting was not sustainable.
- To bridge the reporting gap and remove manual effort to compile Excel/PPT based reports for Rekor's leadership, board of directors and investors, Rekor looked to a BI platform to solve this need.

## Operational Sources for Reporting

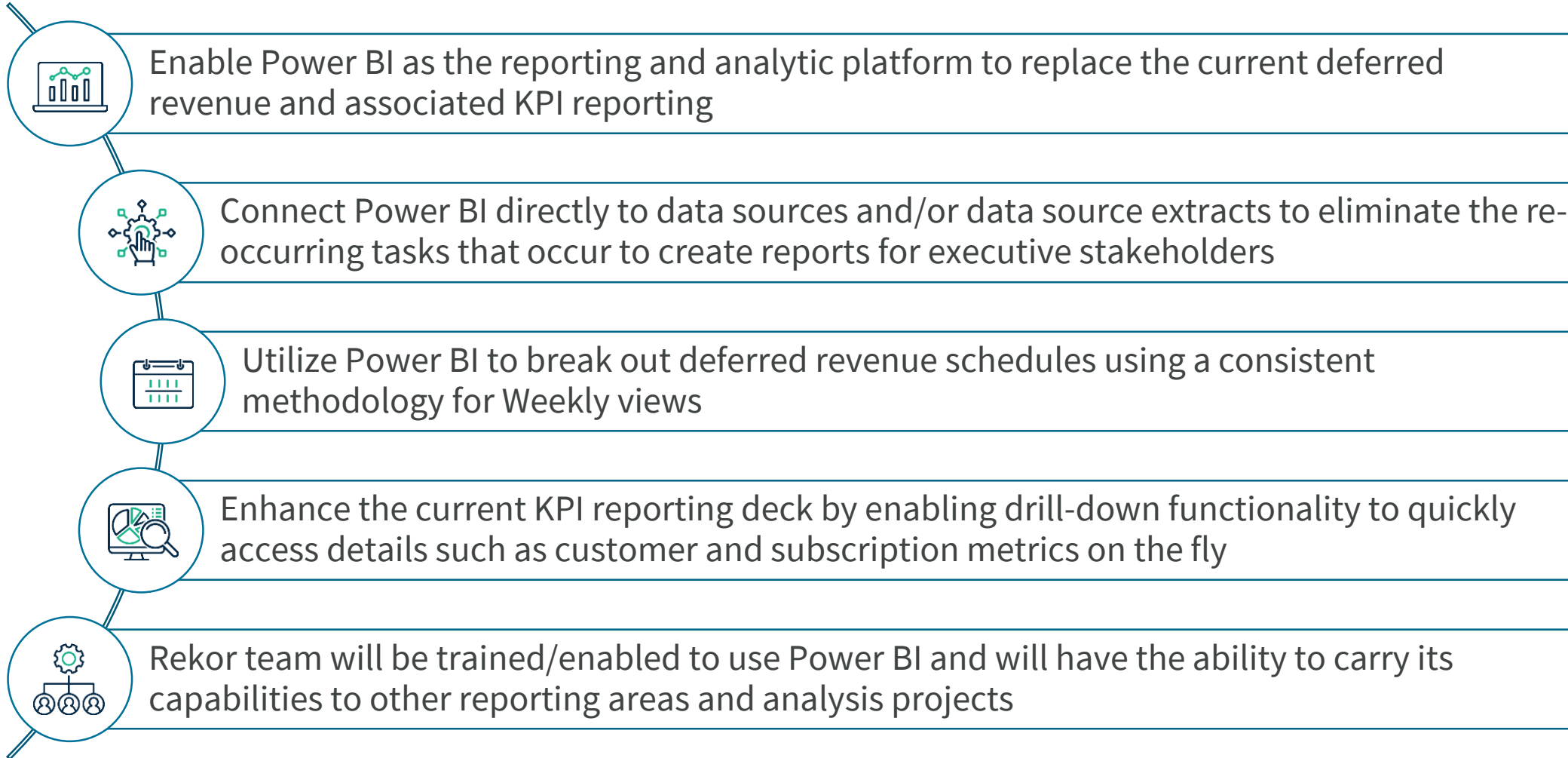


# Pre-Project Discovery



- Performed pre-project analysis of the manual effort required to produce weekly/monthly reporting packages
- Worked as a team to determine a project approach that would deliver the best solution to meet Rekor's timeline, budget and internal resource availability/capabilities
- Identified Microsoft Power BI as the platform for reporting, visualization and analytics
- Identified specific goals that enable ability to access, analyze and report on near real-time data to “Customer->Sale->Revenue” analysis
  - Eliminate re-occurring manual processes required to generate reports and KPIs for:
    - Budget vs Actual Comparisons
    - Deferred Revenue Schedule
    - Calculation of KPIs (Active Subscriptions, Revenue per Subscription by Product, Customer Metrics, etc.)
- Completed high level proof-of-concept for integration methods for Rekor's source systems
- Upfront and honest about effort required for data modeling and data validation tasks to ensure data accuracy when dashboards/reports were published

# Defined Overarching Goals



# High Level Plan to Meet Objectives



	May-20				Jun-20					Jul-20			
	4	11	18	25	1	8	15	22	29	6	13	20	27
<b>Project Initiation</b>													
Hold Project Kickoff		█											
Grant SC&H access to network and data sources			█										
Initiate Power BI			█										
Define Rekor subject matter experts and roles			█										
Create detailed project plan			█										
<b>Discovery and Design</b>													
Conduct Executive Vision sessions for KPI definitions			█										
Conduct business domain specific reporting design methods			█										
Collect all current-state reporting examples			█										
Document design decisions and present to Rekor			█										
Gain acceptance on proposed build content			█										
<b>Iterative Build</b>													
<b>Integrations</b>													
Salesforce			█										
Stripe			█										
Intacct			█										
HubSpot			█										
<b>Data Modeling and Calculations</b>													
Create Power BI Relationships				█									
Create Power Query and DAX Calculations				█									
Create Power BI Data Sets for Reporting				█									
<b>Visualizations and Dashboards</b>													
Future State KPI Reporting Deck/Dashboard				█									
Future State BvA Report View				█									
<b>Data Validation and Testing</b>													
Conduct data validation kickoff					█								
Provide Power BI data table views for validation					█								
Conduct data review sessions						█							
Achieve sign off source data validates to Rekor expectations							█						
<b>Train and Deploy</b>													
Conduct re-occurring review/training sessions						█							
Conduct end-state training on delivered content							█						
Publish Power BI Content and Assign Access content								█					
Project Go Live									█				

█ Estimated Completion Date  
 █ Areas to Accelerate

# Project Challenges



- Integrations – ***even when you plan in advance!***
- Reverse-engineering source system reports/extracts and fields to replicate metric calculations
- Blending data sources for Deferred Revenue Schedule
- Process to allow flexible methods to update mappings of source data to reporting line items

# What We Accomplished



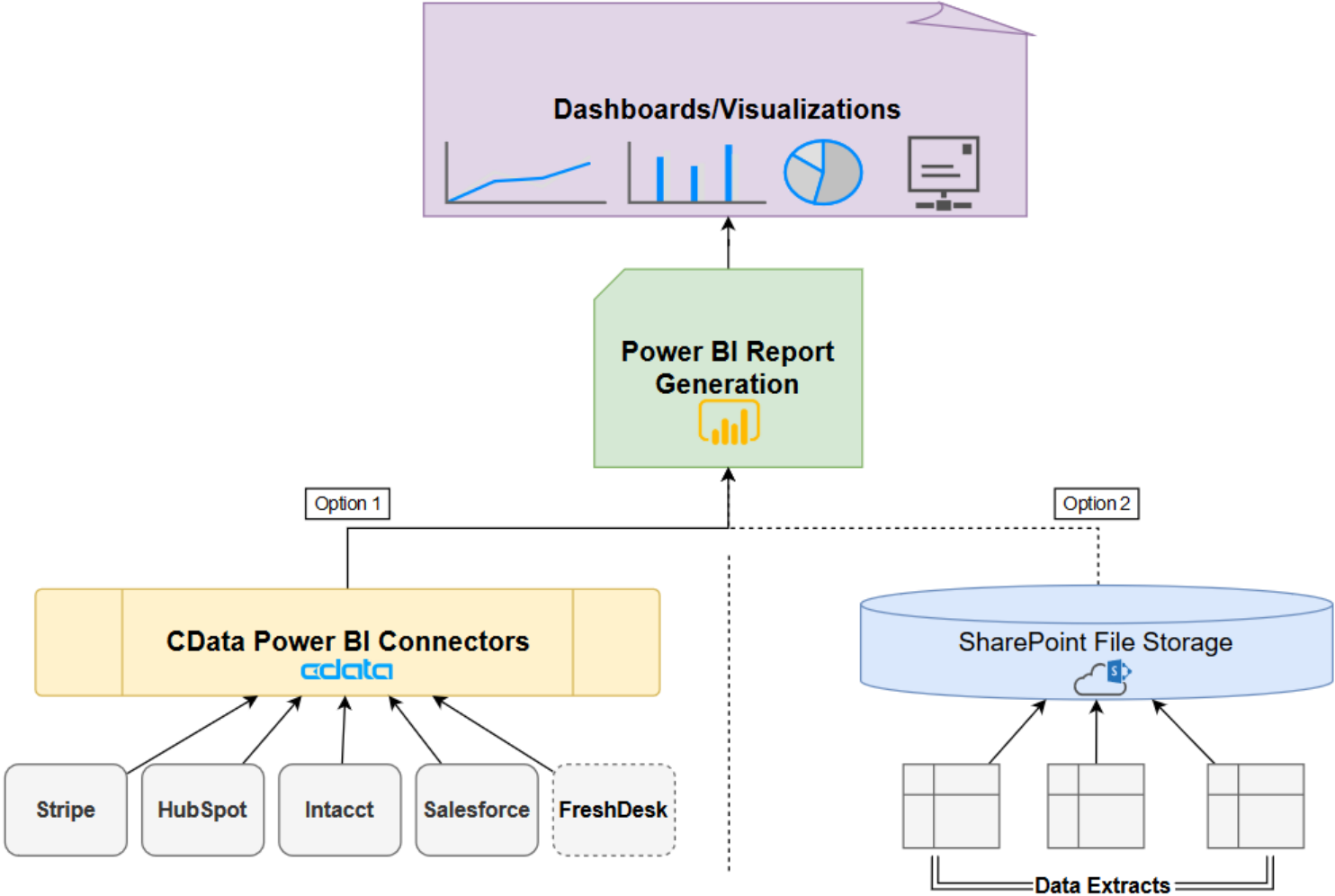
## 6 Week Initiative

**Created a Central Reporting Hub:** Power BI deployed across 20 users to directly access aggregated company metrics across Accounting, Finance, Sales, Marketing, and Customer Support, as well as dive to the lowest level of detail for on-the-fly analysis.

**Elimination of Manual Effort:** Reverse-engineered highly complex Excel driven processes which included blending legacy company data with current COA, creation of a Deferred Revenue Schedule inclusive of Pipeline and Backlog, and elimination of weekly KPI PPT decks. All processes now completed via Power BI refresh process that occurs daily.

**Enabling a Data Driven Culture that Continues to Expand:** Led multiple training sessions to ensure end user adoption and enabled the director of FP&A as the Power BI champion through hands on education throughout the initiative. Client resource has been able to own, operate and expand the usage of Power BI since the project go live and is already expanding capabilities to 3CX Call Center data.

# Direct Connect Operating Model & Tech Stack



# Production Dashboard Examples



# Corporate Overview Dashboard

Type: All | Sale o...: All | Year: 2020 | Month: April



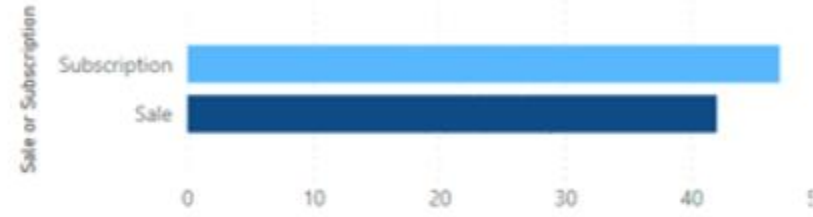
Software Sales

Hardware Sales

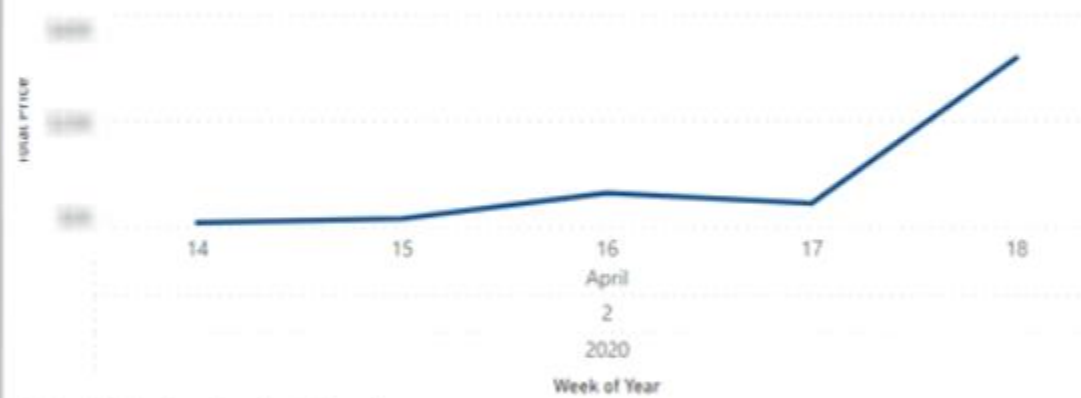
Software Subscriptions

Hardware Subscriptions

Units by Sale or Subscription



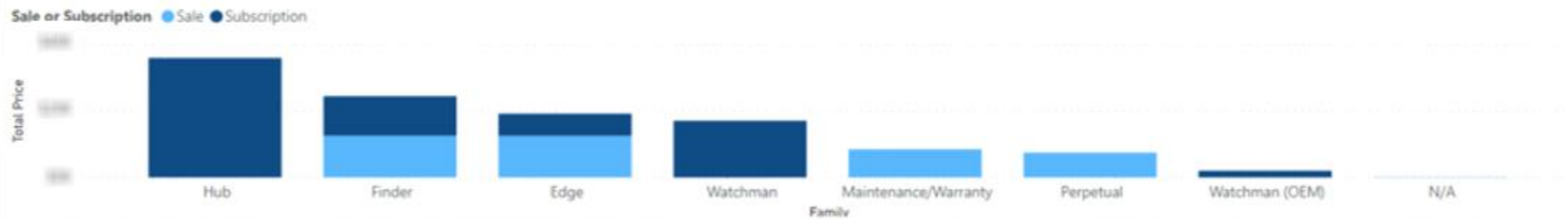
Total Price Over Time



Total Price by Employee



Total Price by Product Family



# Stripe Sales Dashboard

## Monthly Growth Rate

Car Check

Watchman

January 2020



## SaaS Sales

Product ● Car Check ● Watchman ● Total



## Charges by Country



## Subscriptions Breakdown



# Backlog & Pipeline Summary

Quarter

Year

Data refreshed as of:

Multiple se... ^

2020 v

8/19/2020

- Select all
- Q1
- Q2
- Q3
- Q4

## Current Year by Month Detail

Backlog or Pipeline	July	August	September	October	November	December	Total
<b>Backlog</b>							
<b>Corporate</b>							
Hardware							
Legacy ATSE							
Software							
<b>SaaS</b>							
Software							
<b>Pipeline</b>							
<b>Corporate</b>							
Hardware							
Software							
<b>Total</b>							

## Current Year Quarterly Backlog

Backlog or Pipeline	Qtr 3	Qtr 4
<b>Backlog</b>		
<b>Corporate</b>		
Hardware		
Legacy ATSE		
Software		
<b>SaaS</b>		
Software		
<b>Pipeline</b>		
<b>Corporate</b>		
Hardware		
Software		
<b>Total</b>		

## Annual Backlog

Backlog or Pipeline	2020	2021	2022	2023	2024	2025	Total
<b>Backlog</b>							
<b>Corporate</b>							
Hardware							
Legacy ATSE							
Software							
<b>SaaS</b>							
Software							
<b>Pipeline</b>							
<b>Corporate</b>							
Hardware							
Software							
<b>Total</b>							

## Takeaways for Any Organization Embarking on This Journey

Appropriate Planning and  
Defining Expectations Based on  
**Business Requirements**

Appointing the Right Project  
Champion

Patience with Integration and  
Modeling Stages

Elevating Issues Quickly and  
Reaching Decisions to Mitigate

Emphasis on Organization's  
Resources to Assist with Data  
Validation

Pushing for Adoption and  
Expanding Usage Post-  
Implementation



Questions?

# Contact Information



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