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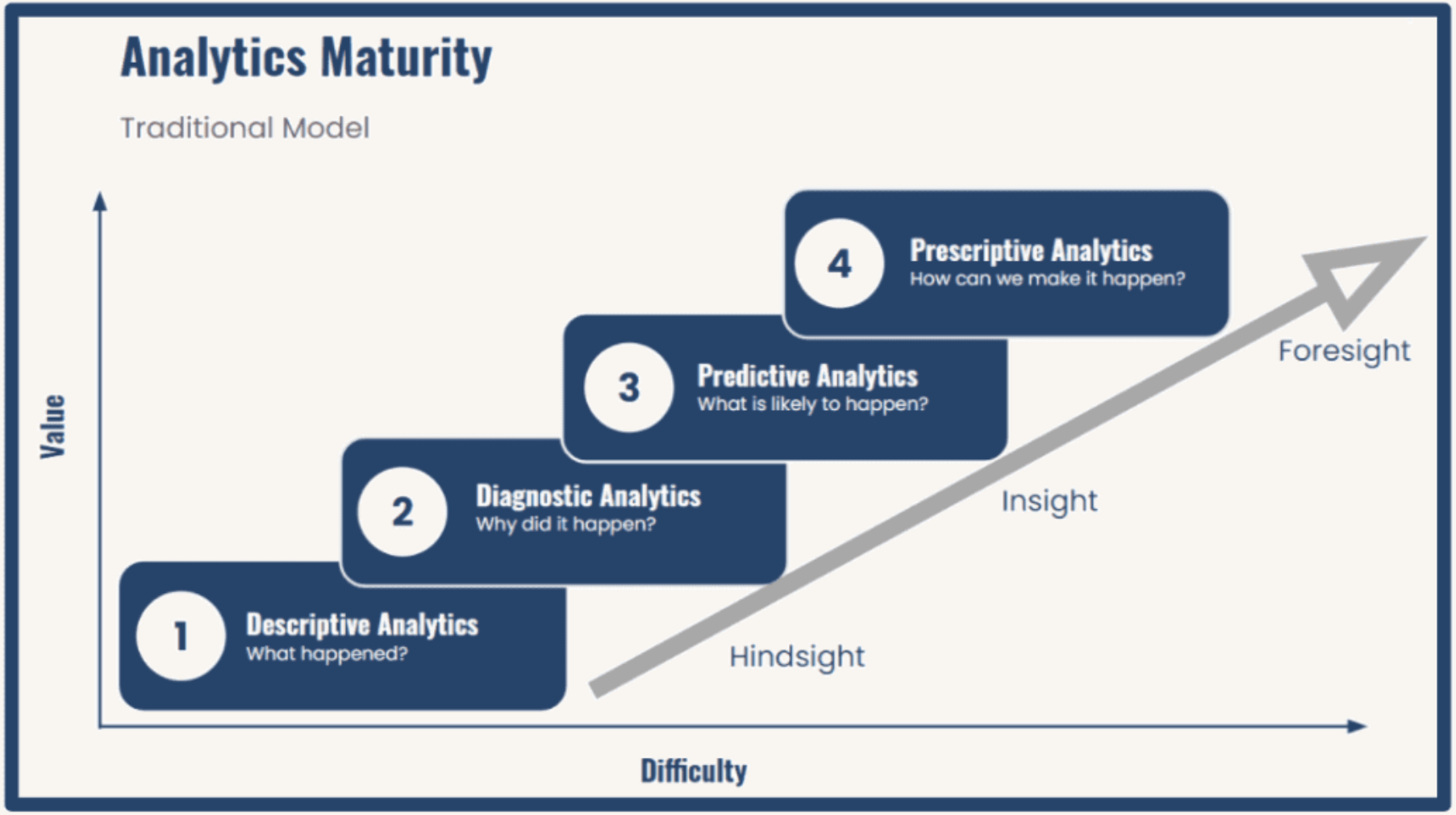
We simplify data to help your business grow.

Data Science Projects

An overview of Pomerol's recent data science projects, covering the business problem addressed, solution design, and business value delivered for each client.

The Analytics Maturity Curve

As analytics maturity increases, the opportunity for business value increases. Where is your organization in this journey?



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Clients – Industries - Technology

Our experienced data science team rely on the principles of data science – they can deploy their expertise across any industry or tech stack

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Illumis

Illumis helps their clients identify and recover money from invoice duplication and fraud.

Description & ML Target	Automating and optimizing a legacy process for identifying duplicate and fraudulent invoices.
Technology	Data Prep = T-SQL ML = Amazon SageMaker Analytics = Qlik (on-prem)
Problem	Existing process identifies too many candidate matches (false positives) for analysts to process. The conversion rate is too low. An optimized process with reduced false positives would increase recoveries and revenue.
Business Value	A non-binary probability of an invoice being a match or fraudulent lets analysts adjust their test criteria client by client based on risk factors. Analysists are more efficient, recoveries have increased.

G&D Integrated Transport

G&D Integrated provides logistics and transport services. They run multiple sorting and distribution warehouses, and operate a fleet of trucks.

Description & ML Target	Predicting the future maintenance cost of each truck in the fleet to support the 'repair or replace' decision making process.
Technology	Data Prep = Qlik SaaS ML = Qlik AutoML Analytics = Qlik SaaS
Problem	The decision to repair or replace trucks was being made largely on gut feel and tribal knowledge. Dozens of variables make this a particularly difficult business decision if the process is not data driven.
Business Value	Reducing fleet management overhead and making better purchasing decisions long-term.

Hunt Electric – Labor Forecasting

Hunt Electric is a commercial electrical contractor. Typical projects involve hospitals, schools and data centres.

Description & ML Target	Predicting the weekly hours required to complete a construction project.
Technology	Data Prep = Qlik SaaS, SQL ML = Qlik AutoML Analytics = Qlik SaaS
Problem	Poor labor scheduling, labor rate negotiation, or upstream dependencies, often erode margins on projects. Project managers need a more accurate view of how much labor they will need, and when they will need it.
Business Value	Improve gross margin by reducing wastage on incorrectly scheduled labor, overtime labor, or premium rate labor.

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Hunt Electric – Cash Flow Forecasting

Hunt Electric is a commercial electrical contractor. Typical projects involve hospitals, schools and data centres.

Description & ML Target	Predicting how many days it will take for an invoice to be paid in full by the customer to improve accuracy of the cash flow forecast.
Technology	Data Prep = Qlik SaaS, SQL ML = Qlik AutoML Analytics = Qlik SaaS
Problem	As Hunt has scaled, their AR and AP balances have grown significantly. On-time-payment by clients is poor, and the Finance team doesn't know its future cash position or what line of credit it requires in future.
Business Value	A clear cash flow forecast helps Hunt negotiate an optimal line of credit. It also gives Hunt the tools it needs to pro-actively identify and chase risky customers, or choose which payables to delay payment on.

United Federal Credit Union

UFCU provides members with traditional retail banking services, such as savings accounts, loans, mortgages, and investment opportunities.

Description & ML Target	Migrating and optimizing a 'propensity to buy' model from R to Python.
Technology	Data Prep = Snowflake ML = R, Python Analytics = Qlik
Problem	A migration to cloud data warehousing provider, Snowflake, was the catalyst for the migration and optimization of UFCU's cross sell model from R to Python.
Business Value	Modernizing the ML model to handle future scale, and adopting Python as the programming language, a more common and powerful data science language.

United
FEDERAL CREDIT UNION

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Smart Chicken – Customer Demand

Smart Chicken is a Nebraskan based poultry producer – a pioneer of the air chilled production process - focussing on the fresh, organic, and natural food production segment.

Description & ML Target	Forecasting customer demand at the customer and SKU level.
Technology	Data Prep = SQL ML = DataRobot Analytics = Qlik (on-prem)
Problem	Fresh organic poultry has a short shelf life, so coordinating demand and supply is critical to reducing risk and preserving margin. Smart Chicken wanted to forecast at the uniquely granular level of customer + SKU.
Business Value	Improve profitability by reducing waste, improving product availability, and anticipating demand swings at the SKU level.

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Smart Chicken – Flock Mortality – Bird Maturity

Smart Chicken is a Nebraskan based poultry producer – a pioneer of the air chilled production process - focussing on the fresh, organic, and natural food production segment.

Description & ML Target	Forecasting anticipated flock mortality rates and flock maturity dates to better inform the product supply forecast.
Technology	Data Prep = SQL ML = DataRobot Analytics = Qlik (on-prem)
Problem	Fresh organic poultry has a short shelf life, so coordinating the processing of a flock with an equivalent level of demand is critical. Predicting the exact supply by piece/weight per flock and the optimal processing date help improve margins and refine the supply forecast.
Business Value	Improve profitability by processing flocks at the optimal time. Improve the supply forecast by predicting the exact supply by piece/weight per flock .

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Insurety Capital

Insurety Capital is a specialty finance company driving growth for Medicare agencies by buying their future commissions upfront for cash every week.

Description & ML Target	Identifying duplicate insurance applications
Technology	Data Prep = SQL ML = Azure ML Analytics = PBI
Problem	“We don’t know if we’re investing in repeat applications and we don’t have the full context of the applicant”
Business Value	Duplicate applications erode margin and cause inefficiency once discovered manually.

Norfolk Iron & Metal

Norfolk Iron & Metal has grown to become one of the largest steel service centers in the Midwest

Description & ML Target	Forecasting product demand
Technology	Data Prep = SQL ML = DataRobot Analytics = Qlik (on-prem)
Problem	Norfolk Iron & Metal wanted to better anticipate location-specific demand to optimize inventory management
Business Value	Reduce inventory costs and capture more demand. Skip learning the IT/Administrative skills to coordinate this workflow.

NORFOLK IRON & METAL

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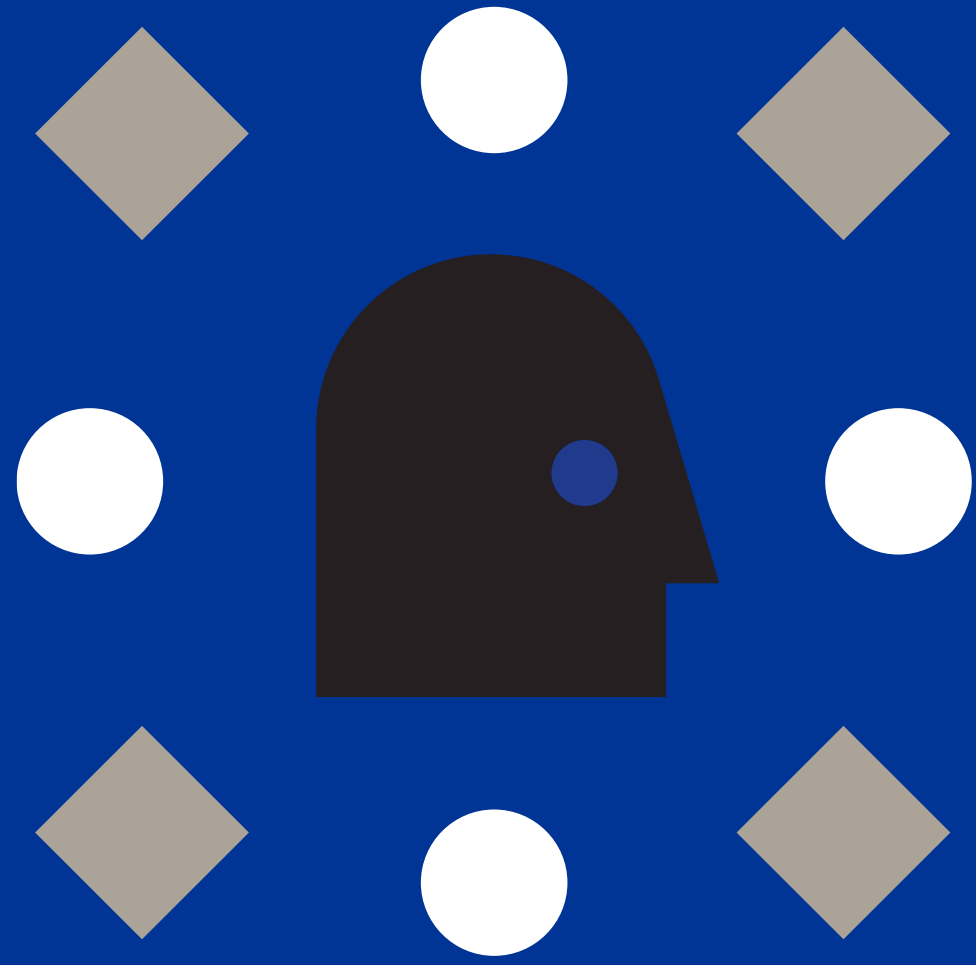
Northrim Bank

Northrim Bank is one of Alaska's leading banking institutions catering to both personal and business banking

Description & ML Target	Next best offer model to improve member cross sell
Technology	Data Prep = SQL, Qlik ML = R Analytics = Qlik (on-prem)
Problem	Cross sell penetration is a leading metric for credit unions and banks. Cross sell was not reaching its potential due to the inability to target specific customers or segments with marketing, promotions, or offers targeted specifically at their needs.
Business Value	Cross sell scores have increased. Marketing can now run segmented campaigns.

Thank you



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