INDUSTRY EXAMPLES OF PRESCRIPTIVE ANALYTICS

APPLICATIONS AND VALUE

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Industry Examples Of Prescriptive Analytics

Applications And Value

Case Studies

Mining and Resources 1

- Integrated Mining & Chemical Co.
- Eurasian Coal Producer
- European Water Utility
- Top 3 U.S. Refiner
- Global Energy Company

Consumer Products 2

- Top 3 Global CPG (FMCG)
- Global CPG (FMCG)
- National Postal Service
- Global Manufacturer
- U.S. Forest Products Company

Communications, Media and Technology 3

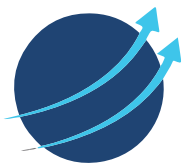
- European Telephone, Television, and Internet Provider
- US Cable & Internet Company
- Global Wireless Distribution and Services Company

Other Industries 4

- US Federal Agency
- Cash Logistics Operator
- Asian Shipping Co.
- Professional Services Firm

MINING AND RESOURCES

CLIENT	USE CASES	VALUE	RIVER LOGIC DIFFERENTIATION
 Integrated Mining & Chemical Co. (Revenue >$2B)	› 24-month (monthly time periods) product mix optimization including RM/WIP buy/sell › 30-year strategy (yearly time periods) determines the right number of mines, allocates capital and establishes sourcing polic	› **3-5% NPV improvement** (up to $80M) › Financial projections significantly more accurate › **Higher agility** to re-plan (hours/days vs. weeks)	✓ Integrated mine, plant processing and chemical supply chain optimizes to company NPV ✓ One model structure supports multiple planning processes
 Eurasian Coal Producer (5M+ Customers)	› Integrate S&OP and financials in a complex supply chain (30 mines/ enrichment plants; 40 storage areas; 150 SKUs; thousands of logistics alternatives) › Product mix, coal processing, coal blending, transportation and financial what-ifs/ decisions	› **$200-$250M in annual profit increase** › Increased **fill rates from 80% to 99%** › Fewer planning analysts required › Re-plan decreased from 2-4 days to hours	✓ Move from sequential (production, sales, financials) to a collaborative, simultaneous planning process ✓ Integrate complex supply chain, product mix and financials into one model
 European Water Utility (5M+ Customers)	› 30-year strategy planning – asset investments, service levels, risk register › Short term sludge operations management – daily sludge tankering, daily/weekly sludge processing	› **$1B reduction in NPV** of investment required › **15% cost reduction** in sludge processing	✓ Engineering quality representation with near auditquality financials in one model ✓ Leverage optimization to identify savings and unique insights in sludge operations

 Top 3 U.S. Refiner (Revenue $40B+)	› Medium term logistics planning, including asset commitments/ nominations › Optimization of spot arbitrage trading opportunities › Short-term logisticsoptimization	› **Doubling of profitability** from trading and logistics operation › Analyze hundreds of scenarios in less than half the time	✓ Combine logistics and commercial operations into one representation ✓ Identify previously unseen marginal profit opportunities
 **Global Energy Company** (Revenue >$100B)	› Optimize pipeline nominations and capacity allocation across the USA's NG and LNG operations › Identify opportunities for trading arbitrage › Optimize asset management agreement bid terms	› **Identification of multi-million $ profit improvement** › Significantly faster reaction time to respond to new opportunities › Avoidance of poor decisions	✓ Represent NG pipelines, LNG operations, contracts and financials in one model ✓ Identify unique crosscommodity opportunities ✓ Support different planning horizons (e.g., daily, monthly)

CONSUMER PRODUCTS

CLIENT	USE CASES	VALUE	RIVER LOGIC DIFFERENTIATION
 Top 3 Global CPG (FMCG) (Revenue >$2B)	› Plan and optimize the trade promotions calendar based on a realistic model of the business, including critical constraints (e.g., min/max frequency, promote/do not promote together, budgets, etc.) › Ensure feasible tie to budgets and P&L	› Up to **3% improvement in net revenue** › Agility to adjust plans within minutes › Financial projections significantly more accurate	✓ Consider halo effects, competitive campaigns, forward buys, etc. ✓ Optimize to multiple objectives (optimize profit, revenue, cost, volume, etc.)
 Global CPG (FMCG) (Revenue >$2B)	› Optimize production allocation, plant/line staffing levels, inventory and logistics › Support creation of feasible supply chain budgets and monthly financial reforecasting. › React to market events (e.g., Brexit, FX fluctuations)	› **2-4% reduction in COGS** › Financial projections significantly more accurate › **Higher agility** to re-plan (hours/days vs. weeks)	✓ Raw material costs, manufacturing, supply chain, labor, financials and all constraints in one representation ✓ Optimize to multiple objectives (meet demand, minimize cost, manage risk)

 National Postal Service (Serves 150+ M people)	› Regional daily/ weekly planning of mail movements, including resource requirements, routes and timing › Intra-city (regional and local DCs) daily logistics optimization	› **15% reduction** in addressable resource and transportation spend › Ability to run up to **8,000 scenarios per day, automatically**	✓ Represent logistical network and how costs are incurred in one model ✓ Identify cost minimization opportunities while meeting SLA requirements
 Global Manufacturer (Revenue >$10B)	› Network & capacity optimization, including production sourcing, investments and movement of production lines across regions › Optimize to profit, revenue and volume	› **Multi-million profit improvement** insights › Significant reduction in planning level of effort	✓ Consider transit and ramp up times for equipment movements ✓ Multi-step manufacturing with differential import/export duties
 U.S. Forest Products Company (Revenue >$4B)	› Weekly/monthly S&OP decision support, including product allocation, capacity planning and supply/ demand matching › Optimize product mix and overall plan to maximum profit	› **2% of revenue in additional profit** › Deeper knowledge of key performance drivers › Higher confidence in overall plan	✓ Combine operations, demand and financials to identify unique performance improvement opportunities ✓ Evaluate different objectives (e.g., volume, cost, profit)

COMMUNICATIONS, MEDIA AND TECHNOLOGY

CLIENT	USE CASES	VALUE	RIVER LOGIC DIFFERENTIATION
 European Telephone, Television, and Internet Provider (Revenue ~ $6B)	› Fiber rollout across 2 countries including infrastructure (trenching, cabling) through to final home installation › Optimize scheduling based on construction partner characteristics, forecasts, capex dollars, and ROI objectives	› **2% NPV improvement** on a £5B investment › Optimal schedule determined including premises and crews by period, local authority and region	✓ Ability to vary objective function automatically including financial metrics, operational metrics, ratios, etc. ✓ Determine optimal plans by considering all operational, financial, and risk models simultaneously.
 US Cable & Internet Company (30+M Customers)	› Bandwidth optimization: allocation of spectrum for different services to maximize volume through constrained transmission network	› Up to **15% increase in available capacity** › Potentially exceeding $1B in NPV from higher revenue and capex avoided	✓ Ability to explain the model in visual/natural language, establishing trust and driving higher adoption within the field
 Global Wireless Distribution and Services Company (Revenue ~$10B)	› Product mix analyses from simulation scenarios based on historic mix and usage › Optimization scenarios based on various assumptions and objectives (e.g., profit, market share, customer lifetime value)	› Consider **complex customer behaviors** of deferring decisions, substituting to other phones, dropping out, etc. › Proof project rationalized mix from 46 to 34 products for a region identifying a $1.5M profit improvement without sacrificing the most important customer preferences	✓ Product mix includes optionality to force a buy, sell (i.e., pre-defined mix) or have the model decide based on objective function ✓ Increase value of demand forecast and customer analytics by optimizing across entire value chain

MINING AND RESOURCES

CLIENT	USE CASES	VALUE	RIVER LOGIC DIFFERENTIATION
 US Federal Agency (~45,000 employees)	› Allocation of personnel to training sessions and locations subject to training equipment and instructor availability › Additional objective to minimize travel cost	› **10% training throughput increase** with no additional staff or investment › Up to $4M/year in travel cost reduction	✓ Ability to deliver 8-week proof of concept crucial to gaining buy-in for this approach ✓ Visual nature drives user confidence
 Cash Logistics Operator (moves 80% of currency in South Africa)	› Daily logistics planning for currency processing, transportation and various types of vault deposits, projecting 5 weeks out › What-if scenarios on resource overtime, unplanned demand and expedited transportation	› One time **33% reduction of cash in circulation** › **18% recurring savings** on transportation, processing cost and vault deposit penalties (or higher interest)	✓ Optimize trade offs across transport and processing costs vs. interest earned and early withdrawal penalties in different vaults and deposit durations ✓ Crystalize the economic value of marginal decisions, such as running over-time

Asian Shipping Co. (Extensive South East Asia network)	› Capacity planning – allocation of ships to routes, optimal fleet line-up › Empty container logistics – optimization of empty container availability vs. cost of transport	› **>10% reduction in fuel consumption** › Greater capacity available in high-demand markets › Lower empty container logistics costs	✓ Complex modeling of empty containers logistics, including port constraints, ship schedules, etc. ✓ Capacity plan to maximum profit
Professional Services Firm (>100k employees)	› Long-term capacity planning to ensure right mix of senior and expert staff, subject to recruiting and retention assumptions › Short-term allocation of staff to projects, aiming for maximum overall profit	› 1-3% margin improvement expected › Higher confidence in overall growth strategy	✓ Optimize the use of the right staff, in the right project to ensure the appropriate skill mix while maximizing margin ✓ Generate senior management support through visual models

About River Logic

River Logic has been a global innovator in prescriptive analytics (optimization) since 2000. Its platform — designed for business users — enables enterprise-wide optimization, collaborative planning, and performance management, all delivered through a revolutionary user experience. By understanding how to best utilize cross functional resources and manage trade-offs, companies make more impactful decisions.

River Logic goes to market primarily through partner organizations like PwC, Deloitte, Accenture, and Microsoft, helping them develop high-value applications that monetize their IP. Recent clients include Unilever, Boral, Philip Morris International, Boise Cascade, McKee Foods, and the Russian Post. Typical client value-add ranges from 10% in cost reduction to profit improvements equal to 2-5% of annual sales. River Logic strives to help every customer achieve at least 10X return on investment, but it is common for customers to see even higher returns.

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