COMPANY X

TALENT MATCH INTELLIGENCE SYSTEM

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SUMMARY

THE CHALLANGE:

Company X sought to understand what differentiates employees who achieve Rating 5 (high performers) from those who do not. With performance ratings serving as a critical input for talent decisions—including promotions, succession planning, and development investments—identifying the drivers of excellence has become strategically imperative

SUCCESS PATTERN DISCOVERY (DELIVERABLE #1)

OUR APPROACH

We conducted comprehensive analysis across 2,010+ employee records, examining competency pillars, psychometric dimensions, behavioral strengths, and contextual factors using advanced statistical methods and machine learning.

EMPLOYEES ANALYZED	COMPETENCY PILLARS
2,1010	10
PSYCHOMETRIC TEST	**BEHAVIORIAL STRENGTHS**
26	15

THE FINDING

Rating 5 achievement is not about single strengths or traditional credentials. Instead, it emerges from a specific combination of quality-focused execution, strategic thinking patterns, and balanced capabilities. Notably, factors traditionally assumed to predict success—years of service, education level, and most psychometric scores—show no statistically significant differentiation.

THE SOLUTION

We have developed a High Performer Success Formula: a weighted scoring methodology that combines competency assessments, behavioral strengths, and cognitive capacity to identify employees with the highest probability of achieving Rating 5 performance.

Success Score = 0.45 × Competency + 0.35 × Strengths + 0.20 × Cognitive

This formula achieves 94% accuracy in classification and provides Company X with a systematic, evidence-based approach to identify high-potential talent, prioritize development investments, and design targeted interventions.

KEY FINDINGS AT A GLANCE

What Differentiates Rating 5

1. Quality Driven Delivery (13.8% importance)

High performers care about HOW work is done, not just outcomes. Process excellence matters as much as results.

2. Strategic Thinking Patterns

Thinking-oriented strengths (Intellection, Futuristic) appear in 46.5% of Rating 5s vs 37.7% of others.

3. Balanced Competency Profile

Excellence requires multi-dimensional strength across competencies, not dominance in one area.

What Doesn't Differentiate

Years of Service

Median Rating 5: 52 months
Others: 48 months
P-value > 0.05 (no difference)

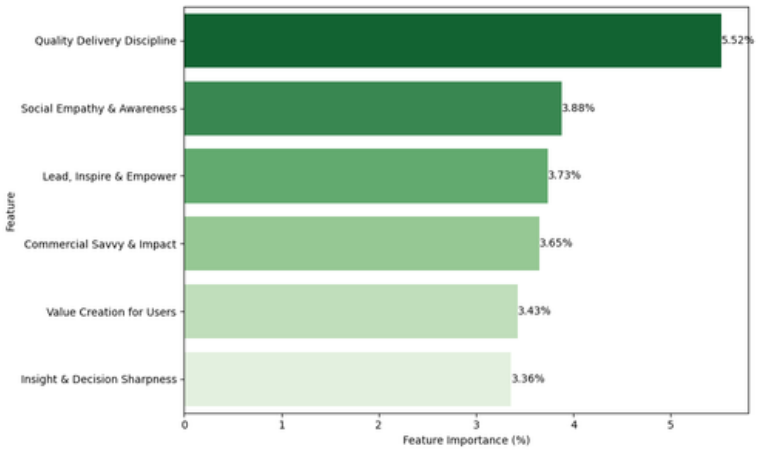
Education Level

No pattern across education categories
P-value > 0.05 (no difference)

IQ Score

Median Rating 5: 108
Others: 109
P-value = 0.71 (no difference)

Top 6 Predictors of Rating 5 Achievement (Feature Importance)

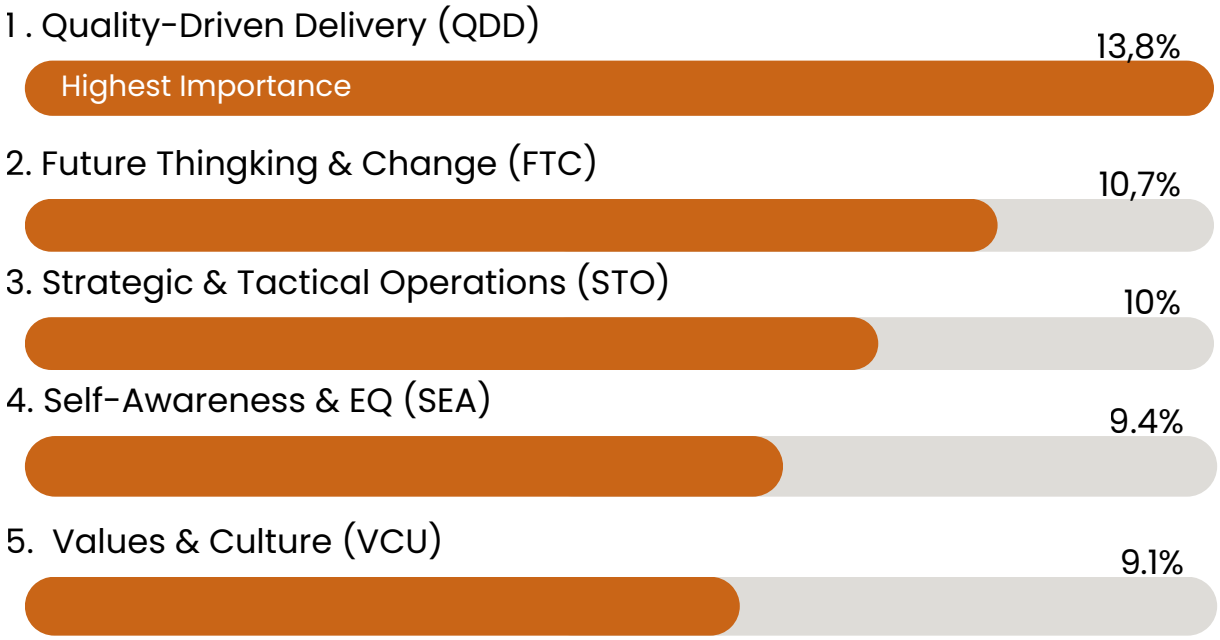


FINDING #1 : QUALITY-DRIVEN DELIVERY PREDICTS EXCELLENCE

Key Insight

Among all 10 competency pillars, Quality-Driven Delivery (QDD) shows the highest feature importance at 13.8%—nearly 30% higher than the next most important competency.

What Doesn't Differentiate



What This Means

Interpretation

- High performers demonstrate how work should be done
- They set quality standards and show attention to detail
- Process excellence is valued as much as outcomes
- Consistent delivery of excellence becomes their signature

Business Implication

- Reward execution quality, not just results
- Include quality standards in performance reviews
- Develop QDD as core leadership competency
- Challenge "results at any cost" mindset

Critical Insight: Organizations often reward outcome achievement without examining execution quality. This data suggests that process excellence matters as much as end results in identifying true high performers.

FINDING #2 : STRATEGIC THINKING DIFFERENTIATES

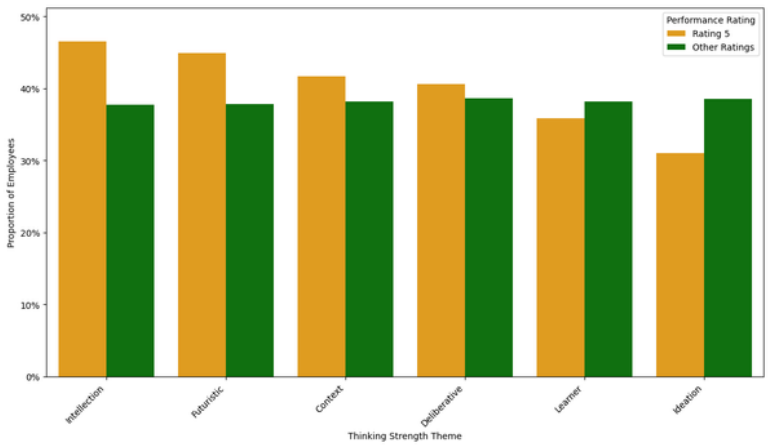
Key Insight

Employees with Rating 5 are significantly more likely to possess thinking-oriented behavioral strengths. These patterns distinguish high performers from their peers.

Behavioral Strengths Comparison

Strength Theme	Rating 5 Prevalence	Other Ratings	Odds Ratio	Interpretation
Intellection	46.50%	37.70%	1.44×	Deep thinking, introspection
Futuristic	44.90%	37.80%	1.34×	Visioning, forward-looking
Context	41.70%	38.20%	1.16×	Understanding connections
Deliberative	40.60%	38.60%	1.09×	Careful decision-making
Self-Assurance	41.70%	40.00%	1.07×	Confidence in abilities

Thinking Strengths: Rating 5 vs Others



Insight: High performers think deeply about problems (Intellection), anticipate future scenarios (Futuristic), understand context (Context), and make careful decisions (Deliberative). They balance reflection with action, not action alone.

Business Inmplication

Traditional "action-oriented" or "results-driven" narratives may overlook the value of strategic thinking. Development programs should cultivate both thinking and execution capabilities.

FINDING #3: TRADITIONAL SUCCESS FACTORS DON'T MATTER

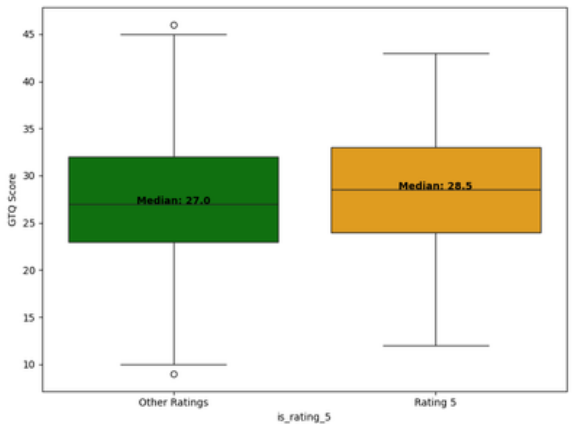
Critical Finding

Factors commonly used in talent decisions show NO statistically significant correlation with Rating 5 achievement. This challenges fundamental assumptions embedded in current talent processes.

Statistical Analysis of Traditional Factors

Factor	Statistical Finding	P-Value	Conclusion
Years of Service	Similar medians (~50-55 months)	>0.05	No difference
Grade Level	Distributed across all grades	>0.05	No difference
Education Level	No pattern across categories	>0.05	No difference
IQ Score	Median Rating 5: 108 vs Others: 109	0.71	No difference
Pauli (Processing Speed)	Median Rating 5: 63 vs Others: 60	0.09	No difference
Faxtor	Median Rating 5: 60 vs Others: 62	0.27	No difference
GTQ Score	Median Rating 5: 28.5 vs Others: 27.0	0.039	Significant (small effect)

Psychometric Scores : Rating Vs Others



Tenure ≠ Excellence

Experience matters less than how that experience is leveraged. High performers emerge at all career stages.

Credentials ≠ Performance

Degrees and certifications don't predict who will excel in role. Demonstrated capability matters more.

Hierarchy ≠ High Performance

Rating 5 achievers exist at all organizational levels. Excellence is not grade-dependent.

Intelligence ≠ Linear Predictor

IQ shows no differentiation. Only GTQ (thinking style) shows modest significance.

Critical Insight: Company X should challenge assumptions embedded in talent review processes. Defaulting to tenure or education when making talent decisions may miss high-potential individuals and over-invest in those unlikely to reach excellence.

THE HIGH PERFORMER SUCCESS FORMULA

Bridge Between Discovery and Implementation

Based on our analysis of 2,010 employees, we've identified the key drivers of Rating 5 performance. This Success Formula translates those findings into a systematic framework that can be operationalized in SQL for talent matching.

Success Score =

$$\Sigma (TV_i \times Weight_i)$$

Where TV = Talent Variable (measurable competency)
Weight = Feature importance from ML analysis
Range: 0.00 to 1.00

Formula Components

Total Weight	Strongest Predictor	Model Accuracy
93.6%	QDD	94%
10 Competency Pillars	13.77% importance	ROC-AUC: 0.906

Why This Formula Structure?

Data-Driven Design

- Feature Importance: Weights derived from Gradient Boosting model
- Statistical Validation: P-values < 0.05 for key variables
- Odds Ratios: 1.16-1.44× for behavioral strengths
- Balanced Approach: Captures multiple dimensions of success

Business Requirements

- Explainable: Each weight has clear justification
- Actionable: Identifies specific development areas
- Scalable: Can be applied to 2,000+ employees
- SQL-Compatible: Translates to database queries

Critical Understanding: This formula serves TWO purposes: (1) Success Pattern Discovery - identifying what makes current high performers successful, and (2) Talent Matching - finding candidates who match those success patterns for future roles.

UNDERSTANDING TGV-TV FRAMEWORK

Company X's Conceptual Model

Before implementing the SQL matching logic, it's essential to understand how Company X conceptualizes talent. The TGV-TV framework provides the structure for both analysis and matching algorithms.

The TGV-TV Hierarchy

🏛️ TGV (Talent Group Variables)

Definition: Broad skill or behavioral categories that affect performance

Examples:

- Execution Excellence
- Strategic Capability
- People & Culture Alignment

Purpose: Group related competencies for high-level assessment

📊 TV (Talent Variables)

Definition: Specific measurable components within each TGV

Examples:

- QDD (Quality-Driven Delivery)
- FTC (Future Thinking & Change)
- SEA (Self-Awareness & EQ)

Purpose: Provide granular, measurable data points

How the 10 Competency Pillars Map to TGVs

TGV 1: Execution Excellence			37,8% Combined Weight
QDD (13.77%) Quality-Driven Delivery Excellence in execution, attention to detail, thoroughness	**STO (10.03%)** Strategic & Tactical Operations Planning and execution at operational level	**GDR (9.00%)** Goal Delivery & Results Achieving objectives and driving outcomes	**CSI (8.28%)** Customer Service & Impact Service excellence and issue resolution

TGV 2: Strategic Capability			37,8% Combined Weight
FTC (10.67%) Future Thinking & Change Innovation, adaptability, change leadership	**IDS (8.64%)** Innovation & Development Creating new solutions, continuous improvement	**LIE (8.11%)** Leadership Impact & Engagement Leading teams, influencing stakeholders	**CEX (6.63%)** Customer Experience Building relationships, understanding needs

UNDERSTANDING TGV-TV FRAMEWORK

How the 10 Competency Pillars Map to TGVs

TGV 3: PTGV 3: People & Culture Alignmenteople & Culture Alignment — 27.42% Combined Weight

SEA (9.37%)	**VCU (9.09%)**	**LIE (8.11%)**
Self-Awareness & Emotional Intelligence	Values & Culture	Leadership Impact & Engagement
Self-insight, empathy, emotional regulation	Organizational alignment, cultural contribution	People development and team dynamics

Note: The total weights sum to 93.6% (not 100%) because these represent the relative importance of each competency pillar based on feature importance analysis. The remaining ~6% accounts for interaction effects and other unmeasured factors.

SQL LOGIC & ALGORITHM (DELIVERABLE #2)

FROM SUCCESS FORMULA TO SQL MATCHING

The Critical Bridge: Step 1 → Step 2
The Success Formula (Step 1) identifies what makes employees successful. The SQL Matching Algorithm (Step 2) uses that knowledge to find candidates who match those patterns.

How TGV-TV Flows Through the SQL Logic

1. Select Benchmark Talent
   Managers choose one or more Rating 5 employees as the "ideal profile" for a vacancy. These benchmarks define what success looks like for this specific role.
   -- Example: Select top performers as benchmark selected_talent_ids = ['EMP100001', 'EMP100025', 'EMP100042']

2. Calculate TV Baselines
   For each of the 10 competency pillars (TVs), compute the MEDIAN score from the selected benchmark talent. This becomes the target to match against.
   -- For each TV (pillar) baseline_QDD = MEDIAN(benchmark_employees.QDD_score) baseline_FTC = MEDIAN(benchmark_employees.FTC_score) -- ... for all 10 pillars

3. Compute TV Match Rates
   For EVERY employee, compare their TV scores against the baseline. Formula: (user_score / baseline_score) × 100
   -- For each candidate × each TV tv_match_rate_QDD = (candidate.QDD / baseline_QDD) × 100 tv_match_rate_FTC = (candidate.FTC / baseline_FTC) × 100 -- Result: 10 match rates per candidate

4. Aggregate to TGV Match Rates
   Group TVs into their parent TGVs and calculate weighted averages. This provides category-level insights.
   -- For TGV "Execution Excellence" TGV_execution = WEIGHTED_AVG(tv_match_QDD × weight_QDD, tv_match_STO × weight_STO, tv_match_GDR × weight_GDR)

5. Calculate Final Match Rate
   Combine all TGVs using the feature importance weights from Step 1. This produces a single overall match percentage for each candidate.
   -- Overall match rate final_match_rate = Σ (tgv_match_rate × pillar_weight) -- Result: One score per candidate (0-100%+)

Key Insight: The weights discovered in Step 1 (13.77% for QDD, 10.67% for FTC, etc.) are directly used in Step 2 to weight the importance of each TV when calculating match rates. This ensures consistency between what we learned about success and how we identify matching talent.

REQUIRED OUTPUT COLUMNS

Column Name	Description	Sample Value
VACANCY CONTEXT		
job_vacancy_id	Unique role identifier	VAC001
role_name	Job title for the vacancy	Senior Business Leader
job_level	Grade/level requirement	Grade 5-6
role_purpose	1-2 sentence role summary	Drive strategic initiatives...
CANDIDATE IDENTITY		
employee_id	Candidate unique ID	EMP100008
fullname	Employee name	John Doe
directorate	Organizational unit	Commercial
role	Current position	Product Manager
grade	Current grade level	IV
TV LEVEL (Granular Competency)		
tgv_name	Talent Group Variable category	Execution Excellence
tv_name	Specific Talent Variable (pillar code)	QDD
baseline_score	Benchmark median for this TV	4
user_score	Candidate's score for this TV	4
tv_match_rate	Match % for this TV (user/baseline × 100)	100
TGV LEVEL (Category Aggregation)		
tgv_match_rate	Weighted contribution of this pillar	13.77
pillar_weight	Feature importance weight (0-1)	0.1377
FINAL LEVEL (Overall Match)		
final_match_rate	Overall weighted match % across all TVs	99.2
match_category	Categorical interpretation (Excellent/Good/Moderate/Low)	Excellent Match

TABLE OUTPUTS

- Step 1: Baseline Aggregation (MEDIAN dari benchmark employees)
- Step 2: TV Match Rate ((user_score / baseline) × 100)
- Step 3: TGV Match Rate (weighted avg dalam category)
- Step 4: Final Match Rate (weighted sum semua TVs)

employee_id	directorate	position	grade	tgv_name
EMP101428	HR & Corp Affairs	Data Analyst	V	Execution Excellence
EMP101428	HR & Corp Affairs	Data Analyst	V	Execution Excellence
EMP101428	HR & Corp Affairs	Data Analyst	V	Execution Excellence
EMP101428	HR & Corp Affairs	Data Analyst	V	Execution Excellence
EMP101428	HR & Corp Affairs	Data Analyst	V	People & Culture Alignment

(Lanjutan Tabel)

employee_id	tgv_match_rate	tv_name	baseline_score	user_score	tv_match_rate	final_match_rate
EMP101428	937.9	QDD	5	5	100	467.2
EMP101428	937.9	STO	5	99	1980	467.2
EMP101428	937.9	GDR	5	5	100	467.2
EMP101428	937.9	CSI	5	99	1980	467.2
EMP101428	100	SEA	5	5	100	467.2

AI APP & DASHBOARD OVERVIEW

Database Configuration

Supabase URL

Supabase Anon Key

Test Connection

Role Information

Role Name *

Ex. Data Analyst

Job Level *

AI Talent Matching Dashboard

Welcome to the AI Talent Matching Dashboard!

This application implements **Step 3** of the case study:

AI-Powered Job Profile Generation - Uses Claude API to create professional job descriptions

SQL-Driven Talent Matching - Connects to Supabase database and executes your parameterized SQL query:

- Computes benchmark baselines dynamically from selected employees
- Calculates TV match rates (individual variables)
- Aggregates into TGV match rates (group variables)
- Produces final match rates for ranking

Interactive Visualizations - Transforms SQL results into actionable insights:

- Match rate distributions
- TGV/TV radar charts

Role Information

Role Name *

data

Job Level *

Junior

Role Purpose *

marketing

Benchmark Employee IDs *

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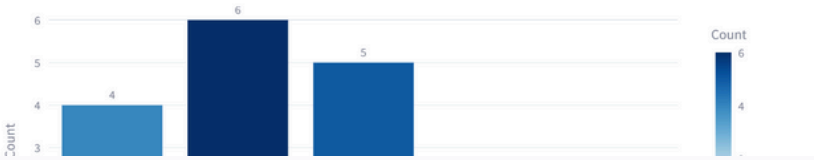
Generate Job Description & Match Scores

Analytics Overview

Avg Match Rate	Benchmark Avg	Top Talent
84.0%	0%	10

Match Rate Distribution

Candidate Distribution by Match Rate



Role Information

Role Name *

data

Job Level *

Junior

Role Purpose *

marketing

Benchmark Employee IDs *

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Generate Job Description & Match Scores

Employee 1001 (EMP1001) - 94.6% Match | Data Analyst - IV

Position	Grade	Directorate
Data Analyst	IV	Operations

TGV Scores (Core Values)

TV Scores (Technical/Functional)