



TVST BC APP Manual

For exclusive use of TVST's program students and customers

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1. What is the TVST BC APP

The TVST BC APP is a transparent, easy-to-use business-case and value-realization calculator designed for TVST's Value Management training programs and for customer usage. Users can build pre- and post-sales business cases to assess the economic value created by IT solutions across TCO, ERP, HCM, CRM, SCM, and Manufacturing. The APP focuses on a curated set of practical KPIs commonly used to quantify cost savings, productivity gains, cash-flow acceleration, and growth impacts.

The purpose of this APP is to **enable** sales, presales, and customer success professionals in software, IT service and technology companies in general, **who are not familiar with business case building**, to perform typical business-case calculations. With the tool, users can easily build pre- and post-sales assessments of the economic value created by IT solutions across ERP, HCM, CRM, SCM, and Manufacturing.

The APP was designed following these principles:

- **Transparent** - all clearly explained, no “black boxes”
- **Sufficient** - no more, no less of what is needed
- **Ultra-Light and Fast** - Single file, offline, autosave
- **Reliable** - standard formulas and valid benchmarking sources
- **Self-explainable** – new users can learn by doing simple exercises

2. Legal Disclaimer

TVST BC VR APP is provided exclusively to enrolled TVST students for educational use within TVST Value Management programs. Its sole purpose is to teach sales, presales, and customer success professionals in software companies how to perform typical business-case calculations (e.g., TCO, productivity, cash-flow, and growth impacts). The APP and related content are confidential and may not be shared with, disclosed to, or used on behalf of any third party; may not be copied, modified, translated, reverse-engineered, or used to create derivative works; and may not be resold, licensed, sublicensed, published, or distributed in any form. All rights are reserved by the holder. The APP is protected by copyright and registered with Safe Creative under Registration Certificate No. 2509213126487 (verification code 2509213126487-9JX6LN); go to link in QR code below for certificate as proof of authorship and date of deposit.



Verification code: 2509213127217-3NP35W

<https://www.safecreative.org/certificate>

3. How to use it

Open the application in any browser, and follow these steps inside the application:

1. Pick number & currency format in the header (e.g., 1,234.56 or 1.234,56) and choose the working currency. All inputs/results follow this selection.
2. Build the Initial Business Case: select KPIs; enter each KPI's Y3 Target once (units are shown, such as %, p.p., turns); provide baseline/operational inputs as prompted (orders per year, \$/hr, etc.).
3. Enter finance settings: Implementation cost (Year 1 only), License & Other costs for Years 1–3, Discount rate (e.g., 8–15%), and Implementation & adoption timeline in months (Year-1 benefits are prorated by $(12 - \text{months})/12$).
4. Click Calculate to see annual benefits by KPI, 3-year net value, ROI, NPV, IRR, Payback, plus a KPI contribution table.
5. Log Value Realization in the Review tab: pick a review period (6–36 months), enter Achieved to date per KPI (same unit as Y3 Target), and Save review. The APP computes Value to Date and marks Status as On-time/Early or Behind vs. a linear plan.
6. Use Dashboard & Reports to view the KPI Variance Breakdown (3-year target, Achieved to date, Gap to target in KPI units, Value to Date). Export CSV/Excel for sharing.

4. KPIs Concepts & Value Impact Formulas

TCO INFRASTRUCTURE KPIs

Reduce Software License Costs

Concept: Reduce recurring license/subscription spend by rationalizing licenses, renegotiating contracts, or moving to more cost-effective licensing models.

Formula: $\text{Impact} = \text{Current Annual License Spend} - \text{New Annual License/Subscription Spend}$

Inputs:

- Input 1: Current Annual License Spend
- Input 2: New Annual License/Subscription Spend

Example: $\$450,000 - \$320,000 = \$130,000/\text{year}$

Reduce IT Maintenance Costs

Concept: Lower ongoing maintenance/support spend through consolidation, vendor changes, or efficiencies from modern platforms.

Formula: $\text{Impact} = \text{Baseline Annual Maintenance Spend} - \text{Post-Implementation Maintenance Spend}$

Inputs:

- Input 1: Baseline Annual Maintenance Spend
- Input 2: Post-Implementation Maintenance Spend

Example: $\$280,000 - \$190,000 = \$90,000/\text{year}$

Reduce Hardware (Servers) TCO

Concept: Cut server and infrastructure TCO by decommissioning on-prem hardware or migrating to more efficient cloud services.

Formula: $\text{Impact} = \text{Baseline Server TCO (Annual)} - \text{New Server/Cloud TCO (Annual)}$

Inputs:

- Input 1: Baseline Server TCO (Annual)
- Input 2: New Server/Cloud TCO (Annual)

Example: $\$360,000 - \$210,000 = \$150,000/\text{year}$

Reduce 3rd Party Customization Costs

Concept: Limit external customization work by adopting standard features, low-code APPs, or simplifying integrations.

Formula: Impact = Baseline Annual Customization Spend – Post-Implementation Customization Spend

Inputs:

- Input 1: Baseline Annual Customization Spend
- Input 2: Post-Implementation Customization Spend

Example: \$150,000 – \$60,000 = \$90,000/year

IT Staff Efficiency

Concept: Free up internal IT time (FTE hours) by automating routine tasks and simplifying operations.

Formula: Impact = Current IT Labor Cost × (1 – Target Hours ÷ Current Hours)

Inputs:

- Input 1: Current IT Labor Cost
- Input 2: Current Hours spent on IT activities
- Input 3: Target Hours after efficiency improvements

Example: \$900,000 × (1 – 24,000 ÷ 30,000) = \$180,000/year

Reduce System Downtime Costs

Concept: Avoid productivity loss and revenue impact by reducing outage hours and incident severity.

Formula: Impact = (Baseline Outage Hours – Target Outage Hours) × Cost per Outage Hour; Cost per Outage Hour = (Affected Employees × Cost per Employee Hour) + Lost Revenue per Hour

Inputs:

- Input 1: Baseline Outage Hours per Year
- Input 2: Target Outage Hours per Year
- Input 3: Affected Employees
- Input 4: Cost per Employee Hour
- Input 5: Lost Revenue per Hour

Example: (40 – 12) × (150 × \$45 + \$5,000) = \$329,000/year

Reduce Integration Costs

Concept: Lower cost to build and maintain integrations via standardized APIs, connectors, or iPaaS.

Formula: Impact = Baseline Annual Integration Build & Maintenance Spend – Post-Implementation Integration Spend

Inputs:

- Input 1: Baseline Annual Integration Spend
- Input 2: Post-Implementation Integration Spend

Example: \$220,000 – \$120,000 = \$100,000/year

FINANCE OPERATION MANAGEMENT KPIs

Improved Finance Team Efficiency

Concept: Shorten cycle times and manual effort in finance (AP/AR, close, reconciliations) to reduce labor cost.

Formula: Impact = Current Finance Labor Cost × (1 – Target Hours ÷ Current Hours)

Inputs:

- Input 1: Current Finance Labor Cost
- Input 2: Current Hours spent on finance processes
- Input 3: Target Hours after efficiency improvements

Example: \$800,000 × (1 – 16,000 ÷ 20,000) = \$160,000/year

Improve FP&A Team Efficiency

Concept: Speed up planning, budgeting, and forecasting through automation and better data, reducing analyst hours.

Formula: Impact = Current FP&A Labor Cost × (1 – Target Hours ÷ Current Hours)

Inputs:

- Input 1: Current FP&A Labor Cost
- Input 2: Current Hours spent on planning & analysis
- Input 3: Target Hours after efficiency improvements

Example: \$600,000 × (1 – 12,000 ÷ 15,000) = \$120,000/year

Improved HR Team Efficiency

Concept: Streamline HR processes (onboarding, changes, benefits) to cut manual work.

Formula: Impact = Current HR Labor Cost × (1 – Target Hours ÷ Current Hours)

Inputs:

- Input 1: Current HR Labor Cost
- Input 2: Current Hours spent on HR processes
- Input 3: Target Hours after efficiency improvements

Example: \$500,000 × (1 – 11,200 ÷ 14,000) = \$100,000/year

Improved Payroll Team Efficiency

Concept: Automate payroll calculations and validations to reduce processing time per cycle.

Formula: Impact = Current Payroll Labor Cost × (1 – Target Hours ÷ Current Hours)

Inputs:

- Input 1: Current Payroll Labor Cost
- Input 2: Current Hours spent on payroll processes
- Input 3: Target Hours after efficiency improvements

Example: \$350,000 × (1 – 7,200 ÷ 9,000) = \$70,000/year

Improved Close Process

Concept: Accelerate month-end/quarter-end close activities to reduce hours and bring forward insight.

Formula: Impact = (Baseline Close Hours – Target Close Hours) × Average Cost per Hour of Close Team

Inputs:

- Input 1: Baseline Close Hours
- Input 2: Target Close Hours
- Input 3: Average Cost per Hour of Close Team

Example: \$3,200 – \$2,400 = \$800/year

Improve DSO (Days of Sales Outstanding)

Concept: Release working capital by collecting receivables faster and reducing DSO.

Formula: $\text{Impact} = (\text{Baseline DSO} - \text{Target DSO}) \times \text{Average Daily Sales} \times \text{Cost of Capital}$; $\text{Average Daily Sales} = \text{Annual Revenue} \div 365$

Inputs:

- Input 1: Baseline DSO (days)
- Input 2: Target DSO (days)
- Input 3: Annual Revenue
- Input 4: Cost of Capital (as a decimal)

Example: $(58 - 49) \times (\$120,000,000 \div 365 = \$328,767/\text{day}) \times 0.10 = \$295,890/\text{year}$

Better Procurement Margins

Concept: Negotiate lower prices across addressed spend categories to improve margins.

Formula: $\text{Impact} = \text{Addressed Spend} \times \text{Negotiated Price Reduction \%}$

Inputs:

- Input 1: Addressed Spend (annual)
- Input 2: Negotiated Price Reduction % (as a decimal)

Example: $\$25,000,000 \times 0.03 = \$750,000/\text{year}$

Uncontrolled Buying Reduction

Concept: Redirect maverick/off-contract spend to negotiated contracts to capture price advantages.

Formula: $\text{Impact} = \text{Baseline Maverick Spend} \times \text{Redirected \%} \times \text{Price Gap \%}$

Inputs:

- Input 1: Baseline Maverick Spend (annual)
- Input 2: Redirected % (as a decimal)
- Input 3: Price Gap % vs. Contract (as a decimal)

Example: $\$6,000,000 \times 0.50 \times 0.06 = \$180,000/\text{year}$

CUSTOMER SERVICE MANAGEMENT KPIs

Faster Case Resolution

Concept: Handle service/support cases faster to reduce handling cost and improve customer experience.

Formula: $\text{Impact} = (\text{Baseline Handle Hours} - \text{Target Handle Hours}) \times \text{Cost per Hour} \times \text{Annual Case Volume}$

Inputs:

- Input 1: Baseline Handle Hours per Case
- Input 2: Target Handle Hours per Case
- Input 3: Cost per Hour
- Input 4: Annual Case Volume

Example: $(2.5 - 1.8) \times \$40 \times 18,000 = \$504,000/\text{year}$

Reduce Billable Time Leakage

Concept: Capture more billable hours by reducing leakage and improving time capture quality.

Formula: $\text{Impact} = \text{Billable Hours} \times \text{Leakage \%} \times \text{Billable Rate} \times \text{Realization \%}$

Inputs:

- Input 1: Billable Hours (annual)
- Input 2: Leakage % (as a decimal)
- Input 3: Billable Rate
- Input 4: Realization % (as a decimal)

Example: $120,000 \times 0.02 \times \$150 \times 0.90 = \$324,000/\text{year}$

Donor and Audit Reporting Savings

Concept: Cut reporting effort through standard templates and automation for donors or auditors.

Formula: $\text{Impact} = (\text{Baseline Hours} - \text{Target Hours}) \times \text{Cost per Hour} \times \text{Number of Reports}$

Inputs:

- Input 1: Baseline Hours per Report
- Input 2: Target Hours per Report
- Input 3: Cost per Hour
- Input 4: Number of Reports per Year

Example: $(40 - 22) \times \$50 \times 120 = \$108,000/\text{year}$

Expenses - Administration Time Savings

Concept: Reduce effort required to submit/approve expense reports.

Formula: $\text{Impact} = (\text{Baseline Hours} - \text{Target Hours}) \times \text{Cost per Hour} \times \text{Number of Expense Reports}$

Inputs:

- Input 1: Baseline Hours per Expense Report
- Input 2: Target Hours per Expense Report
- Input 3: Cost per Hour
- Input 4: Number of Expense Reports per Year

Example: $(0.8 - 0.4) \times \$35 \times 20,000 = \$280,000/\text{year}$

Faster External Regulatory Audit (Cost Savings)

Concept: Shorten external audit duration and internal prep through better data and controls.

Formula: $\text{Impact} = (\text{Baseline External Audit Days} - \text{Target Days}) \times \text{Daily External Audit Fee} + (\text{Internal Prep Hours Saved} \times \text{Internal Cost per Hour})$

Inputs:

- Input 1: Baseline External Audit Days
- Input 2: Target External Audit Days
- Input 3: Daily External Audit Fee
- Input 4: Internal Prep Hours Saved
- Input 5: Internal Cost per Hour

Example: $(20 - 15) \times \$6,000 + (300 \times \$50) = \$45,000/\text{year}$

HUMAN CAPITAL MANAGEMENT KPIs

Reduced Time-to-Fill

Concept: Fill vacancies faster to reduce vacancy costs and speed productivity.

Formula: $\text{Impact} = (\text{Current Time-to-Fill} - \text{Target Time-to-Fill}) \times \text{Annual Hires} \times \text{Vacancy Cost per Day}$

Inputs:

- Input 1: Annual Hires
- Input 2: Current Time-to-Fill (days)
- Input 3: Target Time-to-Fill (days)
- Input 4: Vacancy Cost per Day

Example: $(45 - 35) \times 120 \times \$300 = \$360,000/\text{year}$

Lower Cost-per-Hire

Concept: Reduce recruiting expenses per hire via automation and better sourcing.

Formula: $\text{Impact} = (\text{Current Cost-per-Hire} - \text{Target Cost-per-Hire}) \times \text{Annual Hires}$

Inputs:

- Input 1: Annual Hires
- Input 2: Current Cost-per-Hire
- Input 3: Target Cost-per-Hire

Example: $(\$6,000 - \$4,500) \times 120 = \$180,000/\text{year}$

Lower Voluntary Turnover

Concept: Retain talent to avoid replacement cost and lost productivity.

Formula: $\text{Impact} = \text{Average Headcount} \times (\text{Current Voluntary Turnover} - \text{Target Voluntary Turnover}) \times \text{Replacement Cost per Employee}$

Inputs:

- Input 1: Average Headcount
- Input 2: Current Voluntary Turnover (%)
- Input 3: Target Voluntary Turnover (%)
- Input 4: Replacement Cost per Employee

Example: $800 \times (18\% - 14\%) \times \$20,000 = \$640,000/\text{year}$

Faster Time-to-Productivity

Concept: Onboard new hires faster to reach full productivity sooner.

Formula: $\text{Impact} = (\text{Current Ramp Days} - \text{Target Ramp Days}) \times \text{Annual Hires} \times \text{Daily Contribution Margin} \times \text{Average Ramp Loss Factor}$

Inputs:

- Input 1: Annual Hires
- Input 2: Current Ramp Days
- Input 3: Target Ramp Days
- Input 4: Daily Contribution Margin at Full Productivity
- Input 5: Average Ramp Loss Factor (e.g., 0.5)

Example: $(90 - 70) \times 120 \times \$400 \times 0.5 = \$480,000/\text{year}$

Improved Payroll Accuracy

Concept: Reduce payroll errors to avoid rework, corrections, and penalties.

Formula: $\text{Impact} = \text{Payslips per Year} \times (\text{Current Payroll Error Rate} - \text{Target Payroll Error Rate}) \times \text{Cost per Payroll Error}$

Inputs:

- Input 1: Payslips per Year
- Input 2: Current Payroll Error Rate (%)
- Input 3: Target Payroll Error Rate (%)
- Input 4: Cost per Payroll Error

Example: $12,000 \times (2\% - 0.5\%) \times \$80 = \$14,400/\text{year}$

SALES REVENUE MANAGEMENT KPIs

Higher Lead to Opportunity Conversion

Concept: Convert more MQLs to opportunities through better targeting and follow-up.

Formula: $\text{Impact} = \text{MQLs} \times (\text{Target Conversion} - \text{Current Conversion}) \times \text{Win Rate} \times \text{Average Deal Size} \times \text{Gross Margin \%}$

Inputs:

- Input 1: MQLs per Year
- Input 2: Current Lead→Opportunity Conversion (%)
- Input 3: Target Lead→Opportunity Conversion (%)
- Input 4: Win Rate (%)
- Input 5: Average Deal Size
- Input 6: Gross Margin (%)

Example: $10,000 \times (18\% - 12\%) \times 25\% \times \$25,000 \times 60\% = \$2,250,000/\text{year}$

Higher Win Rate

Concept: Increase the share of qualified deals won via sales enablement and better fit.

Formula: $\text{Impact} = \text{Qualified Opportunities} \times (\text{Target Win Rate} - \text{Current Win Rate}) \times \text{Average Deal Size} \times \text{Gross Margin \%}$

Inputs:

- Input 1: Qualified Opportunities per Year
- Input 2: Current Win Rate (%)
- Input 3: Target Win Rate (%)
- Input 4: Average Deal Size
- Input 5: Gross Margin (%)

Example: $2,000 \times (28\% - 22\%) \times \$30,000 \times 60\% = \$2,160,000/\text{year}$

Shorter Sales Cycle (Cash Acceleration)

Concept: Close deals faster to accelerate cash flows and reduce working capital tied in pipeline.

Formula: $\text{Impact} = \text{Annual New Bookings} \times \text{Gross Margin \%} \times (\text{Days Reduced} \div 365) \times \text{Cost of Capital}$

Inputs:

- Input 1: Annual New Bookings
- Input 2: Gross Margin (%)
- Input 3: Days Reduced (Current Sales Cycle {minus} Target)
- Input 4: Cost of Capital (%)

Example: $\$20,000,000 \times 60\% \times (20 \div 365) \times 10\% = \$65,753/\text{year}$

Higher Average Deal Size

Concept: Upsell/cross-sell to increase average deal value.

Formula: $\text{Impact} = \text{Closed-Won Deals} \times (\text{Target Avg Deal Size} - \text{Current Avg Deal Size}) \times \text{Gross Margin \%}$

Inputs:

- Input 1: Closed-Won Deals per Year
- Input 2: Current Average Deal Size
- Input 3: Target Average Deal Size
- Input 4: Gross Margin (%)

Example: $500 \times (\$27,500 - \$25,000) \times 60\% = \$750,000/\text{year}$

PROFESSIONAL SERVICES

Billable Utilisation %

Concept: Increase the share of consultant time spent on client-billable work (versus admin, bench, or internal time) to raise revenue-generating capacity without adding headcount. Often the single most important KPI in a consultancy.

Formula: $\text{Impact} = \text{Total Available Hours} \times (\text{Target Utilisation \%} - \text{Current Utilisation \%}) \times \text{Billable Rate} \times \text{Gross Margin}$

Inputs:

- Total Available Hours (annual, across consultants)
- Current Billable Utilisation %
- Target Billable Utilisation %
- Billable Rate (per hour)
- Gross Margin %

Example: $120,000 \times (75\% - 68\%) \times \$150 \times 33\% = \$415,800/\text{year}$

Project Margin %

Concept: Improve project delivery profitability — revenue less delivery costs — through better estimating, resourcing, and cost control. Project financial health and margin visibility are key requirements for services organizations.

Formula: $\text{Impact} = \text{Annual Project Revenue} \times (\text{Target Project Margin \%} - \text{Current Project Margin \%})$

Inputs:

- Annual Project Revenue
- Current Project Margin %
- Target Project Margin %

Example: $\$10,000,000 \times (32\% - 27\%) = \$500,000/\text{year}$

Net Revenue per Consultant (PSO)

Concept: Increase average net revenue generated per consultant, a productivity and commercial-performance measure that can also be used in performance, development, and promotion conversations.

Formula: $\text{Impact} = \text{Number of Consultants} \times (\text{Target Net Revenue per Consultant} - \text{Current Net Revenue per Consultant})$

Inputs:

- Number of Consultants (FTE)
- Current Net Revenue per Consultant
- Target Net Revenue per Consultant
- Gross Margin %

Example: $150 \times (\$185,000 - \$165,000) \times 33\% = \$990,000/\text{year}$

Project Financial Forecast Accuracy (PSO)

Concept: Reduce the cost of inaccurate project forecasting — budget overruns, late corrective action, and margin erosion — by narrowing the gap between forecast and actual project revenue, cost, and margin.

Formula: $\text{Impact} = (\text{Current Forecast Variance \%} - \text{Target Forecast Variance \%}) \times \text{Annual Project Revenue} \times \text{Cost-of-Variance \%}$; $\text{Forecast Variance \%} = \text{average } |\text{Forecast} - \text{Actual}| \div \text{Actual}$, across projects

Inputs:

- Annual Project Revenue
- Current Forecast Variance %
- Target Forecast Variance %
- Cost-of-Variance % (share of variance that becomes rework, write-offs, or lost margin)

Example: $\$15,000,000 \times (18\% - 10\%) \times 15\% = \$180,000/\text{year}$

SUPPLY CHAIN MANAGEMENT KPIs

Lower Inventory DOH (Carrying Cost Savings)

Concept: Lower days on hand to reduce inventory carrying costs while maintaining service levels.

Formula: $\text{Impact} = (\text{Current DOH} - \text{Target DOH}) \times (\text{COGS} \div 365) \times \text{Inventory Carrying Cost \%}$

Inputs:

- Input 1: Annual COGS
- Input 2: Current Days on Hand (DOH)
- Input 3: Target Days on Hand (DOH)
- Input 4: Inventory Carrying Cost (%)

Example: $(60 - 45) \times (\$120,000,000 \div 365) \times 20\% = \$986,301/\text{year}$

Better Demand Forecast Accuracy (WAPE)

Concept: Improve forecast accuracy (e.g., lower WAPE: Weighted Absolute Percentage Error) to reduce expedites and obsolescence.

Formula: $\text{Impact} = (\text{Current WAPE} - \text{Target WAPE}) \times \text{Cost per 1\% Forecast Error}$

Inputs:

- Input 1: Current WAPE (%)
- Input 2: Target WAPE (%)
- Input 3: Cost per 1% Forecast Error (expedites, obsolescence, premium freight)

Example: $(30\% - 22\%) \times \$400,000 \text{ per } 1\% = \$3,200,000/\text{year}$

Higher Perfect Order Rate (OTIF)

Concept: Increase on-time, in-full (OTIF) deliveries to reduce credits and penalties.

Formula: $\text{Impact} = \text{Total Orders} \times (\text{Target OTIF} - \text{Current OTIF}) \times \text{Cost per Non-Perfect Order}$

Inputs:

- Input 1: Total Customer Orders per Year
- Input 2: Current OTIF (%)
- Input 3: Target OTIF (%)
- Input 4: Cost per Non-Perfect Order (credits, reships, penalties)

Example: $200,000 \times (97\% - 92\%) \times \$50 = \$500,000/\text{year}$

Better Supplier On-Time Delivery

Concept: Improve supplier OTIF (on time, in full) to avoid expedite and line stoppage costs.

Formula: $\text{Impact} = \text{Supplier Receipts} \times (\text{Target On-Time} - \text{Current On-Time}) \times \text{Cost per Late Receipt}$

Inputs:

- Input 1: Supplier Receipts per Year
- Input 2: Current On-Time Delivery (%)
- Input 3: Target On-Time Delivery (%)
- Input 4: Cost per Late Receipt (expedite, line stoppage)

Example: $100,000 \times (93\% - 85\%) \times \$120 = \$960,000/\text{year}$

Shorter Order Cycle Time (Fulfillment Labor Savings)

Concept: Reduce minutes per order picked/packed/shipped to lower labor cost.

Formula: $\text{Impact} = \text{Orders} \times (\text{Current Minutes per Order} - \text{Target Minutes per Order}) \times \text{Labor Cost per Minute}$

Inputs:

- Input 1: Orders per Year
- Input 2: Current Minutes per Order
- Input 3: Target Minutes per Order
- Input 4: Fully Loaded Labor Cost per Minute

Example: $200,000 \times (12 - 9) \times \$0.60 = \$360,000/\text{year}$

MANUFACTURING MANAGEMENT KPIs

Higher OEE (Overall Equipment Effectiveness): Output Increase

Concept: Increase effective output by raising availability, performance, and quality.

Formula: $\text{Impact} = \text{Available Production Hours} \times \text{Rated Speed (units/hour)} \times (\text{Target OEE} - \text{Current OEE}) \times \text{Contribution Margin per Unit}$

Inputs:

- Input 1: Available Production Hours
- Input 2: Rated Speed (units/hour)
- Input 3: Current OEE (%)
- Input 4: Target OEE (%)
- Input 5: Contribution Margin per Unit

Example: $20,000 \times 50 \times (75\% - 65\%) \times \$8 = \$800,000/\text{year}$

Higher First-Pass Yield (Less Rework/Scrap)

Concept: Reduce defects so more units pass the first time, avoiding rework/scrap costs.

Formula: $\text{Impact} = \text{Units} \times (\text{Target FPY} - \text{Current FPY}) \times \text{Cost per Defect}$

Inputs:

- Input 1: Units per Year
- Input 2: Current FPY (%)
- Input 3: Target FPY (%)
- Input 4: Cost per Defect (rework + scrap)

Example: $1,000,000 \times (96\% - 92\%) \times \$2.50 = \$100,000/\text{year}$

Shorter Cycle Time (More Throughput)

Concept: Produce the same units in less time to free capacity and capture contribution margin.

Formula: $\text{Impact} = \text{Baseline Units} \times (\text{Current Cycle Time} \div \text{Target Cycle Time} - 1) \times \text{Contribution Margin per Unit}$

Inputs:

- Input 1: Baseline Units per Year (at Current Cycle Time)
- Input 2: Current Cycle Time (seconds)
- Input 3: Target Cycle Time (seconds)
- Input 4: Contribution Margin per Unit

Example: $500,000 \times (60 \div 54 - 1) \times \$6 = \$333,333/\text{year}$

Lower Scrap & Rework Rate

Concept: Cut scrap and rework to save material and labor cost.

Formula: $\text{Impact} = \text{Units} \times (\text{Current Scrap \& Rework Rate} - \text{Target Rate}) \times \text{Cost per Scrap/Rework Unit}$

Inputs:

- Input 1: Units per Year
- Input 2: Current Scrap & Rework Rate (%)
- Input 3: Target Scrap & Rework Rate (%)
- Input 4: Cost per Scrap/Rework Unit

Example: $1,000,000 \times (5\% - 3.5\%) \times \$3.00 = \$45,000/\text{year}$

Better Schedule Adherence (Fewer Expedites/Disruptions)

Concept: Stick to schedule to avoid costly expedites, changeovers, and downtime.

Formula: $\text{Impact} = \text{Scheduled Production Hours} \times (\text{Target Adherence} - \text{Current Adherence}) \times \text{Cost per Deviation Hour}$

Inputs:

- Input 1: Scheduled Production Hours per Year
- Input 2: Current Schedule Adherence (%)
- Input 3: Target Schedule Adherence (%)
- Input 4: Cost per Deviation Hour (expedite, changeover, downtime)

Example: $20,000 \times (90\% - 80\%) \times \$150 = \$300,000/\text{year}$

RETAIL MANAGEMENT KPIs

Reduce Inventory Shrinkage

Concept: Cut losses from theft, damage, administrative and vendor errors as a share of sales, through better loss-prevention controls, staff training, and inventory accuracy processes.

Formula: $\text{Impact} = \text{Annual Net Sales} \times (\text{Current Shrinkage Rate} - \text{Target Shrinkage Rate})$

Inputs:

- Input 1: Annual Net Sales
- Input 2: Current Shrinkage Rate (% of sales)
- Input 3: Target Shrinkage Rate (% of sales)

Example: $\$40,000,000 \times (1.4\% - 1.0\%) = \$160,000/\text{year}$

Higher Store Conversion Rate

Concept: Turn a larger share of store foot traffic into completed transactions, through better staffing, merchandising, and customer engagement on the sales floor.

Formula: $\text{Impact} = \text{Annual Store Visitors} \times (\text{Target Conversion Rate} - \text{Current Conversion Rate}) \times \text{Average Transaction Value}$

Inputs:

- Input 1: Annual Store Visitors (footfall)
- Input 2: Current Conversion Rate (%)
- Input 3: Target Conversion Rate (%)
- Input 4: Average Transaction Value

Example: $1,000,000 \times (24\% - 21\%) \times \$55 = \$1,650,000/\text{year}$

Optimized Markdown/Promotion Spend

Concept: Recover margin currently lost to excessive discounting and clearance markdowns by improving pricing, promotion planning, and inventory-to-demand matching.

Formula: $\text{Impact} = \text{Annual Sales Volume Subject to Markdown} \times (\text{Current Average Markdown \%} - \text{Target Average Markdown \%})$

Inputs:

- Input 1: Annual Sales Volume Subject to Markdown
- Input 2: Current Average Markdown (% of price)
- Input 3: Target Average Markdown (% of price)

Example: $\$15,000,000 \times (28\% - 23\%) = \$750,000/\text{year}$

Improved Labor Scheduling Efficiency

Concept: Align store staff hours more closely to footfall and demand patterns, reducing overstaffing during slow periods and understaffing during peaks.

Formula: $\text{Impact} = \text{Current Annual Store Labor Cost} \times (1 - \text{Target Scheduled Hours} \div \text{Current Scheduled Hours})$

Inputs:

- Input 1: Current Annual Store Labor Cost
- Input 2: Current Scheduled Hours (annual, across stores)
- Input 3: Target Scheduled Hours after optimization

Example: $\$6,000,000 \times (1 - 92,000 \div 100,000) = \$480,000/\text{year}$

5. Business Case Concepts and Formulas

The APP computes 3 and 5-year business case using these core calculations. For example, in a 3-year business case:

- Year-1 Benefit Proration: Year-1 run-rate benefits are prorated by $(12 - \text{implementation_months})/12$.
- Annual Net Benefits: $Y1 = (\text{Annual Benefits} \times \text{proration}) - (\text{Implementation} + Y1 \text{ License} + Y1 \text{ Other})$; $Y2 = \text{Annual Benefits} - (Y2 \text{ License} + Y2 \text{ Other})$; $Y3 = \text{Annual Benefits} - (Y3 \text{ License} + Y3 \text{ Other})$.
- ROI (%): $((Y1 + Y2 + Y3) \div \text{Total Costs over } Y1\text{--}Y3) \times 100$.
- NPV (3 years): $\text{NPV} = \sum [\text{NetBenefit}_t \div (1 + r)^t]$, where r is the discount rate (WACC recommended).
- IRR (%): Internal Rate of Return over the 3-year cash-flow vector $[Y1, Y2, Y3]$.
- Payback (years): The year when cumulative cash flow turns non-negative; uses linear interpolation within the year.

6. Value Realization Concepts and Formulas

Value Realization tracks progress against the Y3 Target per KPI and computes cumulative value delivered to date.

- Achieved fraction per KPI at a review month m : $\text{achieved}(m) \div \text{target}$.
- Value to Date per KPI: trapezoidal integration of $[\text{achievement fraction} \times \text{annual run-rate}]$ over time (months).
- Gap to target (KPI unit): $Y3 \text{ Target} - \text{Achieved to date}$.
- Status: On-time/Early if achievement is on/above a linear trajectory to 36 months; otherwise Behind.
- Dashboard Risk (per KPI): compares % of target achieved vs. linear plan at month m ; thresholds indicate High/Medium/Low.

7. Benchmarks & Sources

The Benchmarks & Sources panel lists, for each KPI: suggested improvement ranges (Conservative, Realistic, Ambitious) and curated sources. Use ranges as directional guidance and adapt to client context (size, SKU profile, B2B/B2C mix, labor model). Source links can be opened directly from the APP.

Improvement Ranges by KPI (Conservative / Realistic / Ambitious)

The table below summarizes the suggested improvement ranges for every KPI in the APP, expressed as the typical Target-vs-Current gap used in each KPI's own formula (percentage of baseline, percentage points, or days, as applicable). Use these as directional starting points and always adapt to the customer's specific context (size, maturity, industry, geography, and current process quality).

KPI	Category	Conservative	Realistic	Ambitious
Reduce Software License Costs	TCO Infrastructure	5-10%	10-20%	20-30%
Reduce IT Maintenance Costs	TCO Infrastructure	5-10%	10-25%	25-35%
Reduce Hardware (Servers) TCO	TCO Infrastructure	10-20%	20-40%	40-60%
Reduce 3rd Party Customization Costs	TCO Infrastructure	10-20%	20-40%	40-60%
IT Staff Efficiency	TCO Infrastructure	5-10% fewer hours	10-20% fewer	20-30% fewer
Reduce System Downtime Costs	TCO Infrastructure	10-20% fewer hours	20-40% fewer	40-60% fewer
Reduce Integration Costs	TCO Infrastructure	10-15%	15-30%	30-40%
Improved Finance Team Efficiency	Finance Operations	5-10% fewer hours	10-20% fewer	20-30% fewer
Improve FP&A Team Efficiency	Finance Operations	5-10% fewer hours	10-20% fewer	20-30% fewer
Improved HR Team Efficiency	Finance Operations	5-10% fewer hours	10-20% fewer	20-30% fewer
Improved Payroll Team Efficiency	Finance Operations	5-10% fewer hours	10-20% fewer	20-30% fewer
Improved Close Process	Finance Operations	10-20% fewer hours	20-40% fewer	40-60% fewer
Improve DSO (Days of Sales Outstanding)	Finance Operations	1-3 days	5-10 days	10-15 days
Better Procurement Margins	Finance Operations	1-2%	2-4%	4-7%
Uncontrolled Buying Reduction	Finance Operations	Redirect 20-30%	30-50%	50-70%
Faster Case Resolution	Customer Service	5-10% faster	10-25% faster	25-40% faster
Reduce Billable Time Leakage	Customer Service	0.5-1.0%	1-2%	2-3%
Donor and Audit Reporting Savings	Customer Service	10-20% fewer hours	20-35% fewer	35-50% fewer
Expenses - Administration Time Savings	Customer Service	10-20% fewer hours	20-35% fewer	35-50% fewer
Faster External Regulatory Audit (Cost Savings)	Customer Service	10-15% fewer days	15-30% fewer	30-40% fewer
Reduced Time-to-Fill	Human Capital Management	5-10 days faster	10-20 days faster	20-30 days faster
Lower Cost-per-Hire	Human Capital Management	5-10% lower	10-20% lower	20-30% lower

KPI	Category	Conservative	Realistic	Ambitious
Lower Voluntary Turnover	Human Capital Management	↓ 1-3 p.p.	↓ 3-5 p.p.	↓ 5-8 p.p.
Faster Time-to-Productivity	Human Capital Management	10-20 days faster	20-40 days faster	40-60 days faster
Improved Payroll Accuracy	Human Capital Management	↓ 0.5-1.0 p.p.	↓ 1.0-1.5 p.p.	↓ 1.5-2.0 p.p.
Higher Lead to Opportunity Conversion	Sales Revenue Management	+1-3 p.p.	+3-6 p.p.	+6-10 p.p.
Higher Win Rate	Sales Revenue Management	+1-3 p.p.	+3-6 p.p.	+6-10 p.p.
Shorter Sales Cycle (Cash Acceleration)	Sales Revenue Management	5-10 days faster	10-20 days faster	20-40 days faster
Higher Average Deal Size	Sales Revenue Management	+5-10%	+10-20%	+20-30%
Billable Utilisation %	Professional Services	5-10%	10-15%	15-20%
Project Margin %	Professional Services	2-4 p.p.	4-6 p.p.	6-9 p.p.
Net Revenue per Consultant (PSO)	Professional Services	5-10%	10-15%	15-20%
Project Financial Forecast Accuracy (PSO)	Professional Services	15-25%	25-40%	40-55%
Lower Inventory DOH (Carrying Cost Savings)	Supply Chain Management	↓ 5-10 days	↓ 10-20 days	↓ 20-30 days
Better Demand Forecast Accuracy (WAPE)	Supply Chain Management	↓ 2-4 p.p.	↓ 4-8 p.p.	↓ 8-12 p.p.
Higher Perfect Order Rate (OTIF)	Supply Chain Management	+1-3 p.p.	+3-5 p.p.	+5-8 p.p.
Better Supplier On-Time Delivery	Supply Chain Management	+2-5 p.p.	+5-10 p.p.	+10-15 p.p.
Shorter Order Cycle Time (Fulfillment Labor Savings)	Supply Chain Management	↓ 1-3 min/order	↓ 3-5 min/order	↓ 5-8 min/order
Higher OEE (Overall Equipment Effectiveness): Output Increase	Manufacturing Management	+3-5 p.p.	+5-10 p.p.	+10-20 p.p.
Higher First-Pass Yield (Less Rework/Scrap)	Manufacturing Management	+1-2 p.p.	+2-4 p.p.	+4-6 p.p.
Shorter Cycle Time (More Throughput)	Manufacturing Management	↓ 5-10%	↓ 10-20%	↓ 20-30%
Lower Scrap & Rework Rate	Manufacturing Management	↓ 0.5-1.0 p.p.	↓ 1-2 p.p.	↓ 2-3 p.p.
Better Schedule Adherence (Fewer Expedites/Disruptions)	Manufacturing Management	+2-5 p.p.	+5-10 p.p.	+10-15 p.p.
Reduce Inventory Shrinkage	Retail Management	0.1-0.2 p.p.	0.2-0.4 p.p.	0.4-0.6 p.p.
Higher Store Conversion Rate	Retail Management	1-2 p.p.	2-3 p.p.	3-5 p.p.
Optimized Markdown/Promotion Spend	Retail Management	1-2 p.p.	2-4 p.p.	4-6 p.p.
Improved Labor Scheduling Efficiency	Retail Management	3-5%	5-8%	8-12%

Links to sources for benchmarking information

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