

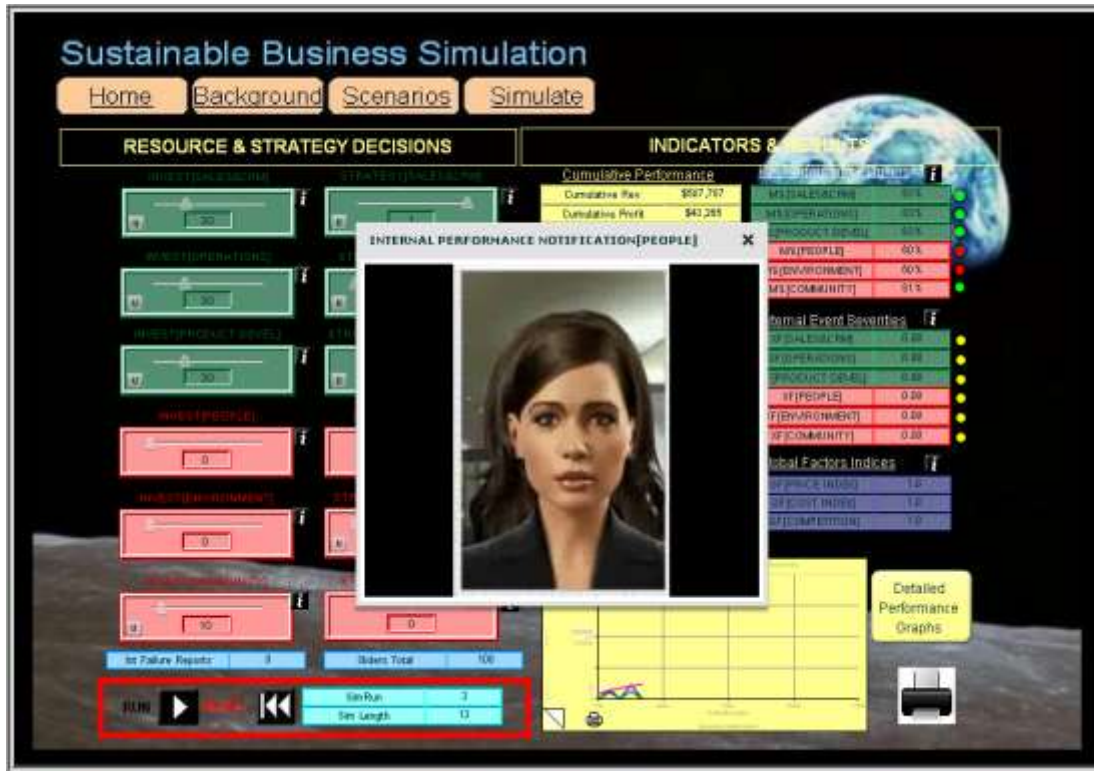
My Business Simulator Collection (October 2011)



Mi-17 helicopter simulator cockpit
Picture Source: <http://www.airforce-technology.com>

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www.bioteamsdesign.com

1. Sustainable Business Simulator



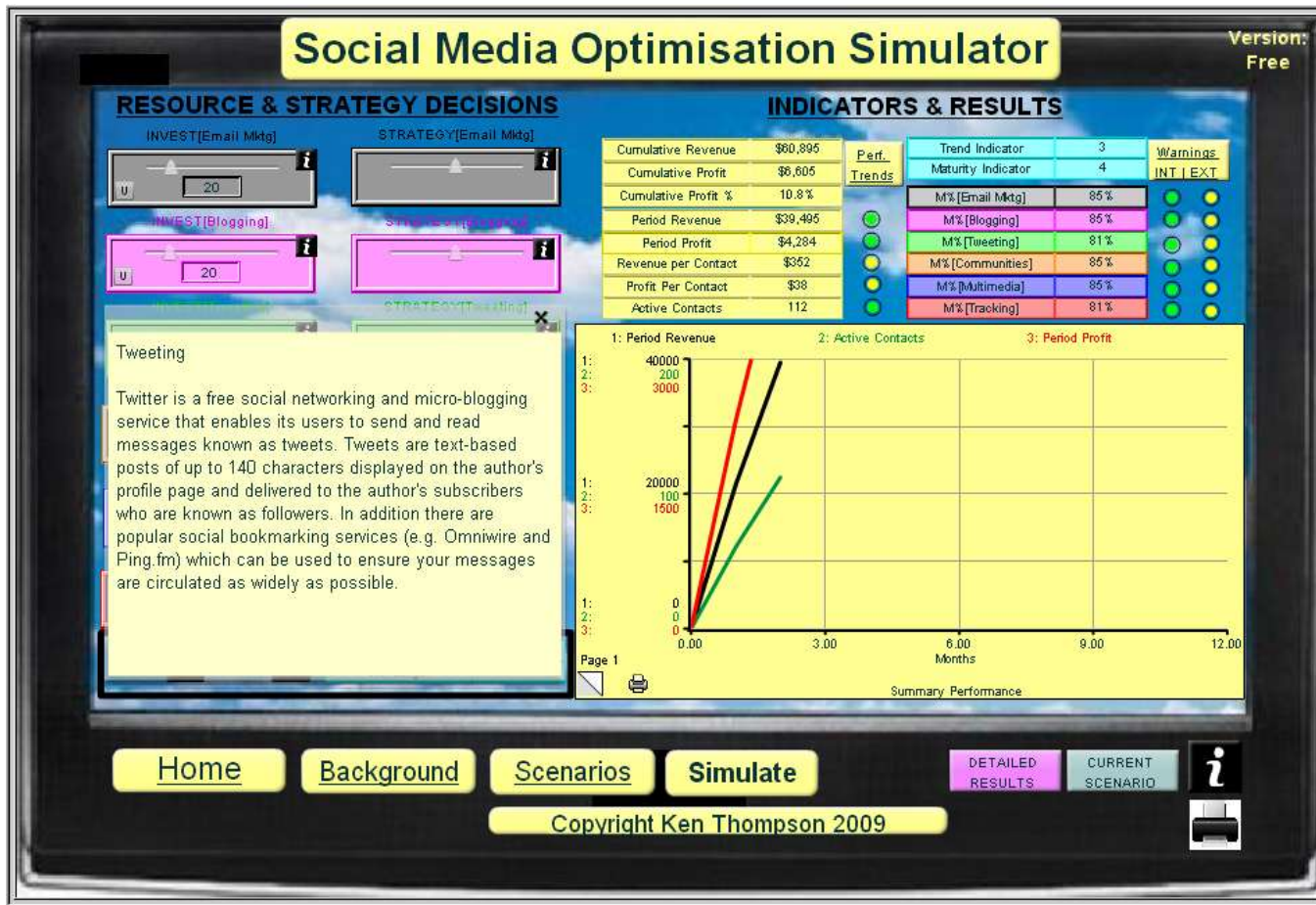
The Sustainable Business Simulation allows leaders to engage with a broad set of decisions about their business each of which either directly impacts their value chain or indirectly mitigates some risk around sustainability. These decisions have immediate impact and also a longer-term impact, which reflects the reality of the time needed to develop new capabilities and address capability issues. The impact of these decisions are instantly displayed on a dashboard each quarter over a 3 year period which shows their impact both on key lagging (financial) and key leading (non-financial) performance indicators.

The simulator can be set up for any number of different scenarios and challenges where factors such as the business start position (maturity) can be varied as well as the ability to schedule negative and positive external and/or global events to start (and finish) at specific points during any simulation. This simulator uses short **life-like talking avatar videos** to create realism on the reporting of certain conditions and events.

Run Sim:

<http://forio.com/simulation/ns/ken.thompson/subs1958/>

2. Social Media Optimization Simulator



One of the biggest challenges for any Enterprise today is Social Media Optimization, defined as "a set of methods for generating publicity through social media, online communities and community websites." The Social Media Optimization Simulator Game lets you instantly 'what-if' the effects of different social media activities (blogging, tweeting etc) on your enterprise.

More Info:

http://www.bioteams.com/2009/09/07/social_media_optimization.html#more

Run Sim:

<http://forio.com/service/netsims/ken.thompson/socmedoptsim/index.html>

3. The Discipline of Market Leaders Simulator

RESOURCE & STRATEGY DECISIONS

INVEST %[CUST INTIMACY]	STRATEGY[CUST INTIMACY]
INVEST %[OP EXCELLENCE]	STRATEGY[OP EXCELLENCE]
INVEST %[PRODUCT L'SHIP]	STRATEGY[PRODUCT L'SHIP]

Financial Performance

Cumulative Rev	\$0
Cumulative Profit	\$0
Cumulative Profit %	0.0%
Period Revenue	\$0
Period Profit	\$0
Period Profit %	0.0%
Rev Per Cust Period	\$0
Profit Per Cust Period	\$0
Customer Growth %	0.0%

Key Performance Drivers

M% [CUST INTIMACY]	0%
M% [OP EXCELLENCE]	0%
M% [PRODUCT L'SHIP]	0%

External Event Severities

XF [CUST INTIMACY]	0.00
XF [OP EXCELLENCE]	0.00
XF [PRODUCT L'SHIP]	0.00

Key Business Indicators

GF [PRICE INDEX]	0.0
GF [COST INDEX]	0.0
Threshold Failures	0

1: Period Revenue
1. 1600000
2. 225000

2: Period Profit
1. 1450000
2. 200000

1. 1300000
2. 175000

Page 7

PERIOD REVENUE & PROFIT

6-month cycles

1.00 4.00 7.00 10.00 13.00

RUN **RESET**

SimRun 0

Select your strategy

Adjust Start Conditions

Schedule Global & External Events

Tailor Sim Model

"The Discipline of Market Leaders" Book

The Discipline of Market Leaders (TDML) by Michael Treacy and Fred Wiersema (1997) equips the leadership of an enterprise with a choice of 3 strategies for competing in the marketplace - Customer Intimacy, Operational Excellence or Product Leadership. TDML says you must excel in one of these AND maintain minimum thresholds for the other two. Here is a little web-based management simulation that lets you to test TDML strategies virtually before betting your business on them!

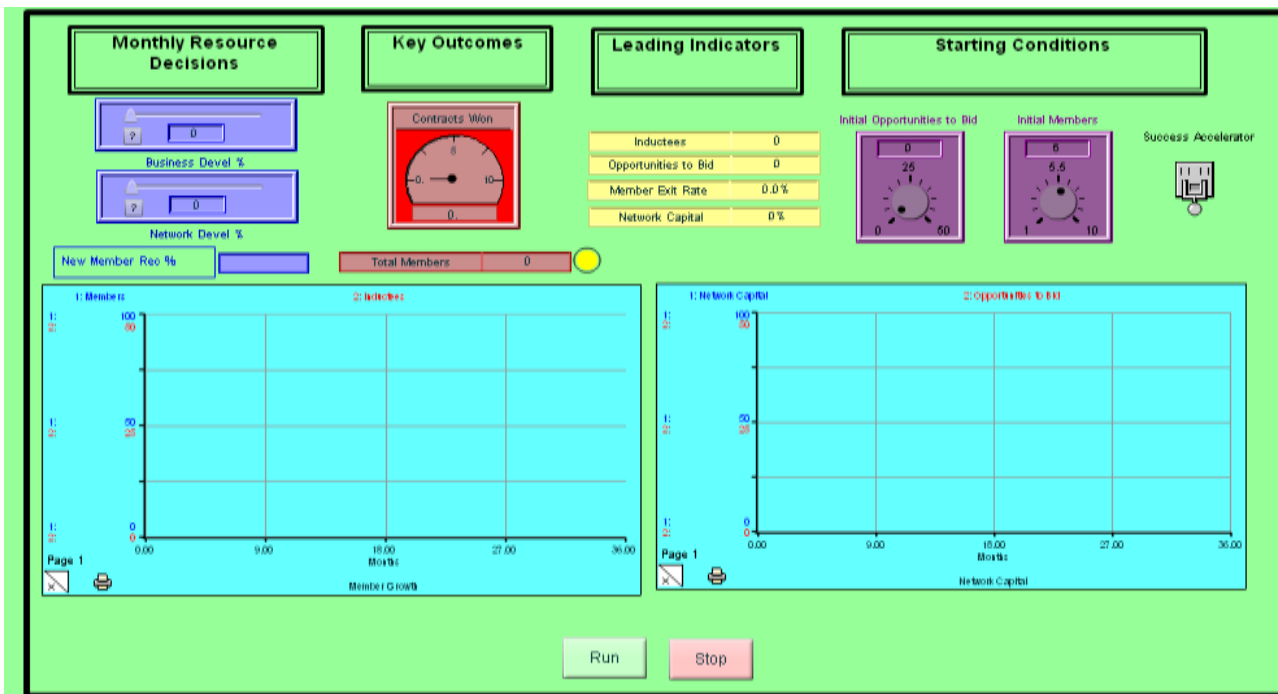
More Info:

http://www.bioteams.com/2009/07/16/the_discipline_of.html#more

Run Sim:

<http://forio.com/service/netsims/ken.thompson/TDML/index.html>

4. Virtual Enterprise Network Simulator



This simulation exposes key dilemmas in the incubation stage of **Virtual Enterprise Networks**. In the early stages of development of Virtual Enterprise Networks some of the key leadership decisions may be counter-intuitive.

This “management flight simulator” allows monthly resource allocation decisions in the areas of business development, member development and network development, to be experimented with in a risk-free environment. It offers the user immediate feedback on the impact of their decisions on key results outcomes – bid opportunities, contracts won, new members, membership base and network capital.

More Info:

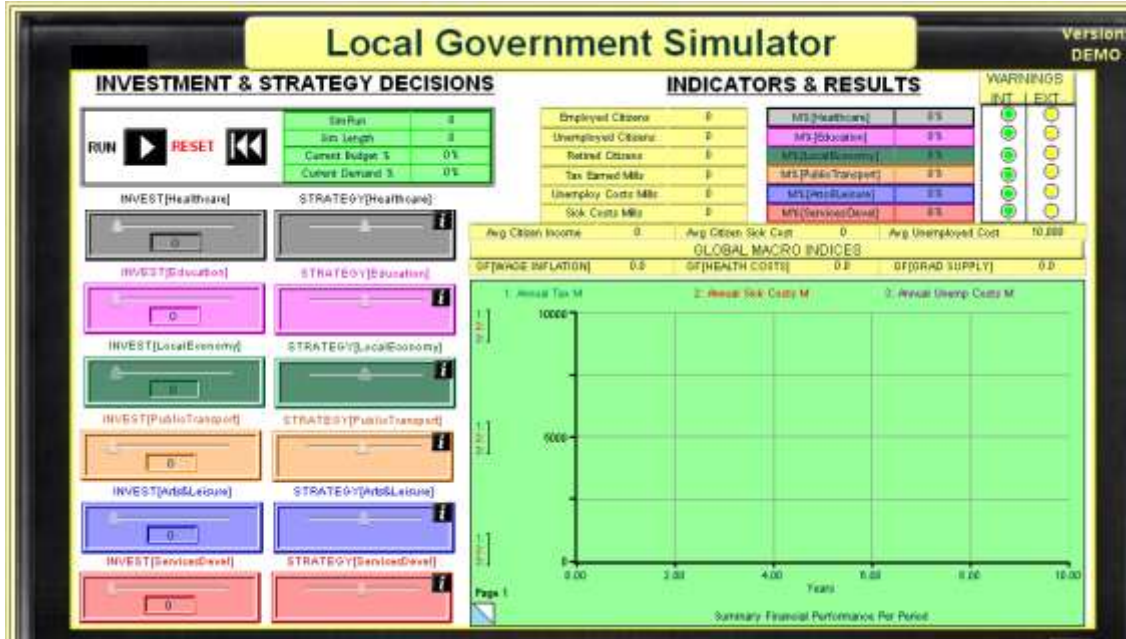
http://www.bioteams.com/2007/11/23/management_flight_simulator.html#more

<http://www.bioteams.com/AManagementFlightSimulatorforVirtualEnterpriseNetworkIncubation.pdf>

Run Sim:

http://forio.com/service/netsims/kenthompson/tne001_fornetsim/index.html

5. Local Government Simulator



The Simulator allows you make annual Local Government Investment decisions over a 10-year period. Each year you decide the % of your budget (which can be growing or decreasing as can Demand) you wish to invest in each of 6 Key Areas and decide the Strategies to implement each of them. Each key activity is effective in different degrees in its ability to provide and support citizens with employment and healthcare.

For example Healthcare investment assists with the flow of healthy potential employees into the economy and also reduces the average annual sickness level (and cost) per citizen whether employed or not. Economic development activities increase the chances of work-seeking employees finding jobs in the region and improve the average regional income levels. Educational investment provides new potential employees and increases their chance of employment, advancement and higher salaries in local companies. Public Transport, Arts & Leisure and Services Investments attracts new employers and make it less likely that citizens will seek employment outside the region or choose early retirement.

The goal is to maximize the number of citizens in employment over the 10-year period and associated income tax earned for the local economy. At the same time you must minimize the costs of local unemployed citizens and the cost of local citizen sickness in the local economy as this drains financial resources from the local economy!

Run Sim:

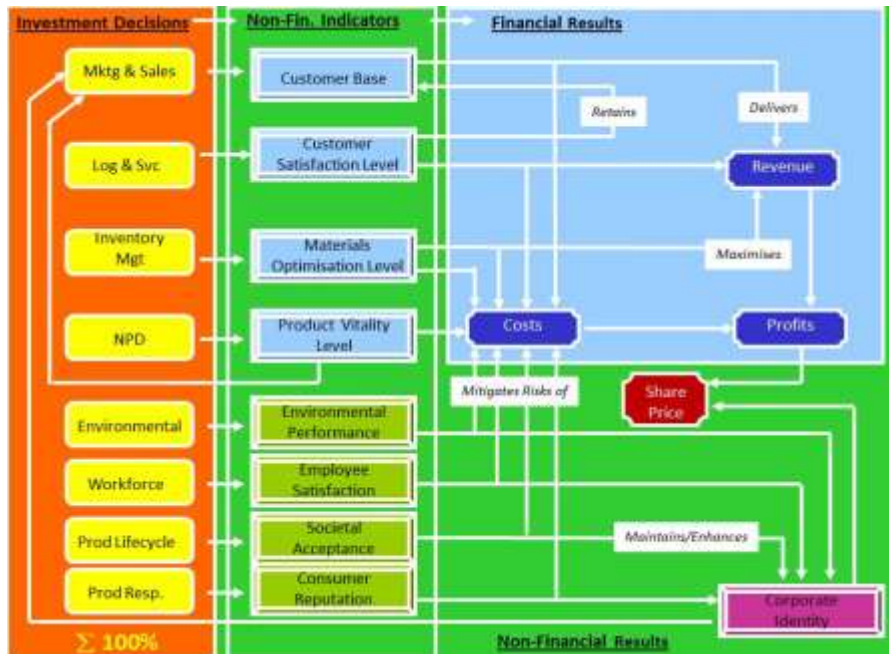
<http://forio.com/simulation/ns/ken.thompson/locgovsimdemo/>

6. Corporate Social Responsibility (CSR) Simulation

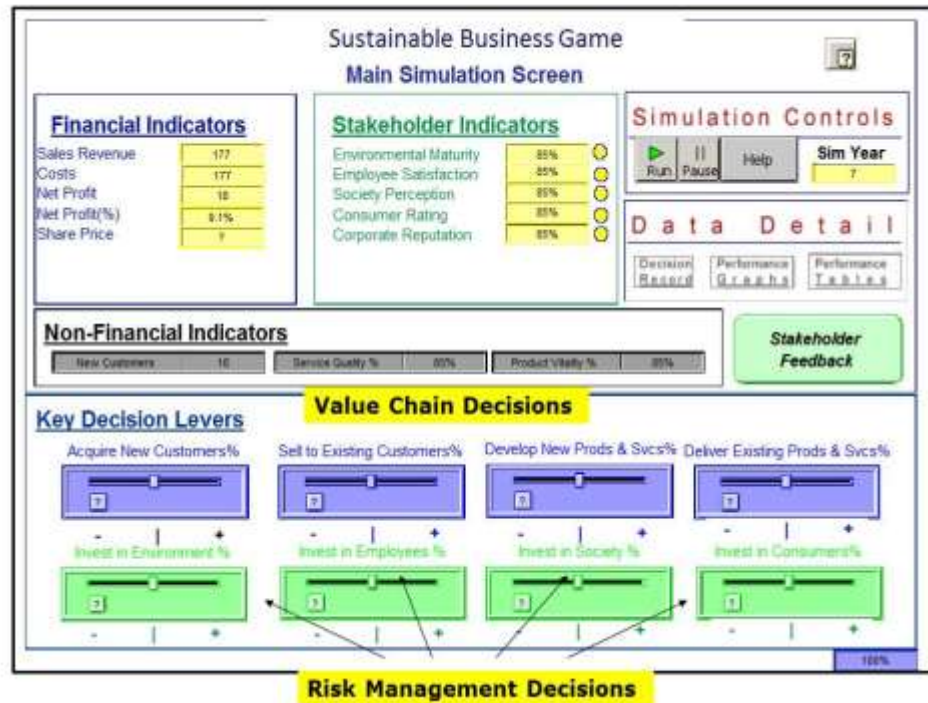
The **Sustainable Business Simulation** was developed for a global organisation as a learning tool for staff and a consulting tool for customers. The simulation enables users to work in teams to explore the trade-offs between direct *Value Chain* decisions such as Sales and New Product Development and *Risk Management / Corporate Responsibility* decisions such as Staff development and Environmental Management.

Value Chain decisions extend the customer base and the level of sales ; **Risk Management decisions** avoid losses and damage to company reputation which also impacts future sales. There is a finite budget and trade-offs need to be made.

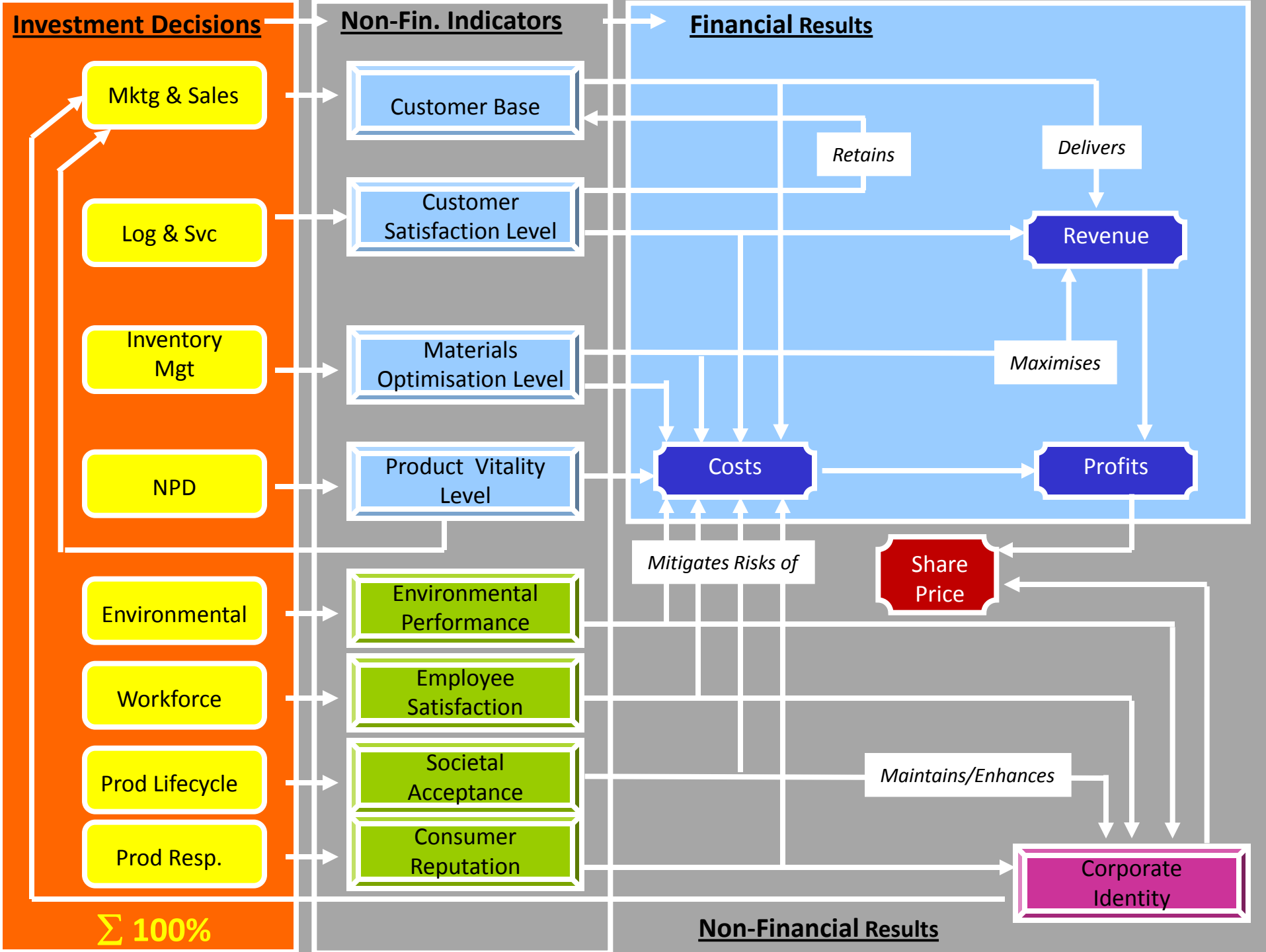
Decisions can be taken on a monthly or quarterly basis and results seen immediately in revenues, profits and share price. The dashboard also shows the impact of decisions on key leading indicators in the style of a balanced scorecard. The simulation can be configured for different market scenarios (such as more competition) and allows scheduling of future events (such as an environmental accident at a company location).



The Sustainable Business Simulation was developed using *ithink* state-of-the-art business simulation technology used by major enterprises including: Americredit Corp, Boston Consulting, Dow Chemical, DuPont, Eastman Kodak, Eli Lilly, Ford Motor Company, General Motors, Hewlett-Packard, Kaiser Permanente, London Business School, Los Alamos National Laboratory, McKinsey & Co, MetLife, NASA, Pfizer, Shell, UK MoD and the US Air Force.



For more information visit www.bioteamsdesign.com or contact ken.thompson@bioteams.com



Sustainable Business Game

Main Simulation Screen



Financial Indicators

Sales Revenue	177
Costs	177
Net Profit	18
Net Profit(%)	9.1%
Share Price	?

Stakeholder Indicators

Environmental Maturity	85%	●
Employee Satisfaction	85%	●
Society Perception	85%	●
Consumer Rating	85%	●
Corporate Reputation	85%	●

Simulation Controls

Sim Year
7

Data Detail

Non-Financial Indicators

New Customers	16	Service Quality %	85%	Product Vitality %	85%
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Stakeholder Feedback

Value Chain Decisions

Key Decision Levers

<p>Acquire New Customers%</p> <p>- +</p>	<p>Sell to Existing Customers%</p> <p>- +</p>	<p>Develop New Prods & Svcs%</p> <p>- +</p>	<p>Deliver Existing Prods & Svcs%</p> <p>- +</p>
<p>Invest in Environment %</p> <p>- +</p>	<p>Invest in Employees %</p> <p>- +</p>	<p>Invest in Society %</p> <p>- +</p>	<p>Invest in Consumers%</p> <p>- +</p>

100%

Risk Management Decisions

7. Off-Price Retail Management Simulator

Simulation Objectives

This simulation allows users to engage with two key off-price decision trade-offs/dilemmas:

1. **What Volume of which products do we buy each month ?** High volumes mean low purchase cost but higher risk of unsold stock (*demand risk*)
2. **What Sales Discount do we offer these products at?** We will need to find the **discount-demand sweetspot** which optimises the net profit . Too little discount we lose sales – too much discount we lose profits!

The aim of the simulation would be to optimise three outcomes

- Net Profit (Revenue less Procurement Costs etc)
- Procurement Budget Utilisation
- Stock Valuation/Position (stock at year end needs to be at right levels for the next year!)

Simulation Rules and Dynamics

- Each month the simulation users would be presented with volumes of available units to buy plus forecast demand for a number of different product lines (setup by admin). We can show users the complete 12 month forward profile or just the current month.
- Users have 2 decisions to make each month 1) how much do I buy of available products from my procurement budget and 2) what discount do I sell these products at.
- Each month the more users buy of a product line the better cost price they will get from the supplier
- Each month's product demand is satisfied only from product in stock (note that newly purchased product will have a specific delivery time and will not automatically become available to sell. This delay will make the simulation realistic and challenging with users needing to procure for **future demand not just current demand**.
- Core Product Line demand will be specified in advance (by admin) on a monthly profile and this will be adjusted by a factor to take into account the level of discount offered. The ability to define this monthly demand allows all kinds of scenarios to be defined such as Seasonal demand, blips, declining demand and growing demand.
- For all Product Lines , opening balances can be created (by admin) for both stock and product procured but not yet delivered – this allows for different scenarios e.g. stock low and high stock by product line

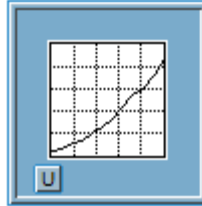
Off-Price Retail Management Simulator

MAIN DASHBOARD SCREEN

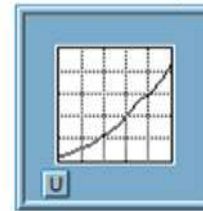
Year to Date Performance

Revenue	2000000
Buying Costs	1000000
Other Costs	500000
Net Profits	500000
Net Profit (%)	25%
Stock Valuation	200000

Purchase Price - Volume Index



Sales Discount - Demand Index



View Graphs & Tables

Simulate Next Month

EXIT

Procurement Budget

Full Year 2000000 Remaining 1000000

Current Month: **March**

Procurement Opportunities

Decisions

Product Line | Avail | Cost Range | RRP

Stock, Sales & Demand

Stock | Prev. Month Sales | Demand

Units | Price | Revenue

Buy | Discount

Product Line	Avail	Cost Range	RRP	Stock Units	Prev. Month Sales Price	Prev. Month Sales Revenue	Demand	Buy	Discount
Ralph Lauren Polos	10000	10.00 -12.00	50.00	5000	40.00	200000		10000	35%
Hilfiger Jeans	5000	5.00 - 7.00	50.00	500	30.00	15000		5000	40%
North Face Hoodies	15000	10.00 -15.00	40.00	5000	20.00	100000		15000	40%

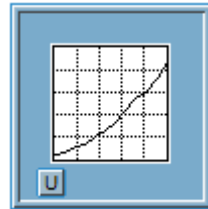
Off-Price Retail Management Simulator

MAIN DASHBOARD SCREEN – WITH COMMENTS

Year to Date Performance

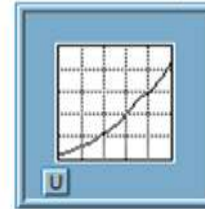
Revenue	2000000
Buying Costs	1000000
Other Costs	500000
Net Profits	500000
Net Profit (%)	25%
Stock Valuation	200000

Purchase Price - Volume Index



Relationship between purchase price and volume procured. The more you buy the lower the price

Sales Discount - Demand Index



Relationship between demand and price discount. The higher the discount the greater the demand.... up to a ceiling

View Graphs & Tables

Simulate Next Month

Current Month: March

Procurement Opportunities

Decisions

Product Line	Availability *	Cost Range	RRP	Stock, Sales & Demand			Demand *	Buy	Discount
				Stock	Prev. Month Sales	Demand			
				Units	Price	Revenue			
Ralph Lauren Polos	10000	10.00 - 12.00	50.00	5000	5000	40.00	200000	10000	35%
		5.00 - 7.00						5000	40%
							100000	15000	40%

* = Product Availability and Product Demand defined per product line on monthly profile for year. Can just show current month or include future months

Opening stock balances and product on order would be set for each product line before the simulation starts

Note there will also be a lead-time from products being bought and being available to sell. This could be set by product line

8. Sales Performance Optimization Simulator

The Sales Optimization Engine is a sophisticated family of tools which identifies the unrealized revenue in any sales operation and how to release it.

The engine starts by loading the organization's own sales KPIs (about 20 indicators covering new contact/suspect rates, pipeline ratios and times and average sale values) into a comprehensive tried and tested sales process model which executes month-by-month for 36 months.

As each opportunity is converted to a customer according to the organization's own conversion rates the full revenue sold and revenue earned is recorded creating an initial Sales Baseline.

The engine then automatically *flexes* each of the organizations sales KPIs individually in turn by 50% and runs the full simulation model with only this setting changed for 36 months month-on-month to create a detailed 'league table' of which KPIs make the biggest difference to the organizations closing revenue position.

The engine supports all types of sales scenarios including product sales where base and upgrade products are taken for subscription periods and project/consulting sales where small projects are initially sold and run for a specific periods some of which convert into bigger and longer follow-on projects.

The engine captures the existing customer and historical revenue position plus the full sales pipeline to ensure it includes all the revenues managed by the sales organisation. It can also capture fixed and variable costs to simulate profitability. In addition staff resourcing forecasts can be generated covering both pre-sales and post-sales staff broken down over a number of different roles.

The engine can handle multiple sales campaigns and product lines each with different sets of KPIs and accepts KPI data from excel and popular sales force systems. A full set of Sales Optimization Reports can be instantly exported to excel which, if required, can be customized by the user or consolidated with other organizational data and systems.

[RUN DEMO](#)

<http://www.salesperformanceoptimizer.com/sales-optimizer-demo.html>

Sales Performance Optimizer

Main Simulation Screen

4 Zones

Rerun model!



ZONE 4: SALES RESULTS

Three Year Forecast	\$3,192,000
TOTAL CUM SALES	\$13,661,219
BASILINE	\$9,113,290
BASILINE DELTA	\$4,547,929
	50%

PIPELINE HEALTH%	0%
Data Validation %	0%
Change Size %	50%
Sales Growth %	50%
All Staff Util%	2223%

SALES RESULTS

Total Cum Rev Sold	\$13,661,219
Total Rev Sold YR1	\$1,746,348
Total Rev Sold YR2	\$4,803,264
Total Rev Sold YR3	\$7,111,607

Total Cum Rev Earned	\$6,628,658
Total Rev Earned YR1	\$209,686
Total Rev Earned YR2	\$1,909,631

Cum Base Rev Sold	\$3,879,989
Cum Upgrade Rev Sold	\$9,781,230
Cum Base Rev Earned	\$1,882,637
Cum Upgr...Rev Earned	\$4,746,020

Instant results!

ZONE 2: SALES KPIS

ARunVal[Contacts]	261
ARunVal[Dir Suspects]	
ARunVal[Base Rev]	\$191
ARunVal[Base Cost]	\$0
ARunVal[Upgrade Rev]	\$321
ARunVal[Upgrade Cost]	\$0

KEY PROCESS INDICATORS	
ARunVal[Suspect Time]	0.25
ARunVal[Qual Time]	0.25
ARunVal[Aoq Time]	2.00

ARunVal[Fut Quality%]	100%
ARunVal[Fut Retain%]	90%
ARunVal[Suspect%]	33%
ARunVal[Qualify%]	30%
ARunVal[Acquire%]	60%
ARunVal[Upgrade%]	60%
ARunVal[Renew%]	90%
ARunVal[UpRenew%]	90%

V0.98

ZONE 1: SALES PROCESS



ZONE 3: SLIDERS

NEW LEADS

SliderVal[Contacts] (Value: 50)

SliderVal[Dir Suspects] (Value: 0)

Change KPIs!

SliderVal[Upgrade Rev] (Value: 0)

SliderVal[Upgrade Cost] (Value: 0)

CONVERSION RATES

SliderVal[Suspect%] (Value: 0)

SliderVal[Qualify%] (Value: 0)

SliderVal[Acquire%] (Value: 0)

SliderVal[Upgrade%] (Value: 0)

SliderVal[Renew%] (Value: 0)

SliderVal[UpRenew%] (Value: 0)

SliderVal[Fut Quality%] (Value: 0)

SliderVal[Fut Retain%] (Value: 0)

TRANSIT TIMES (Change Timeframe)

SYSTEM SLIDERS (Change ALL By%)

Lost Bids Router (Value: 0)

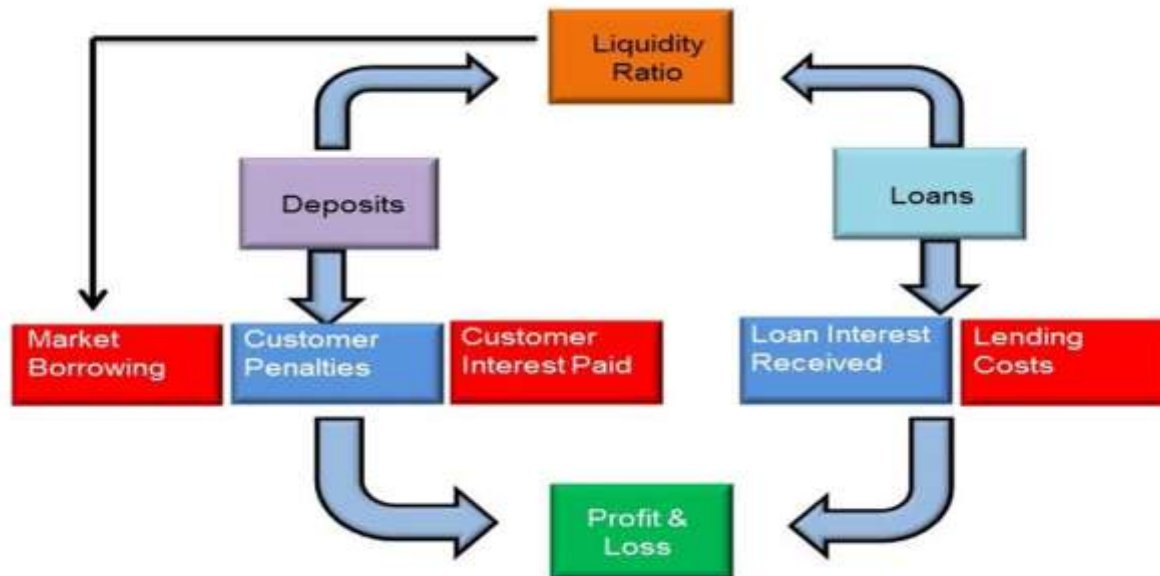
Leakage % (Value: 0)

9. Retail Banking Simulator

The purpose of the Retail Banking Simulation is to balance the customer deposits and customer loans so that there is enough deposit capital to service the loans with the objective of earning greater interest from the loans than paying out on the deposits.

Each month there is the opportunity to allocate resources to the different areas of banking activity across loans and deposits plus the ability to decline to accept a % of loan or deposit applications.

Each month the simulation calculates a Liquidity Gap between Monthly Deposits and Loans and any shortfall must be met by borrowing from the market at a pre-defined interest rate



Retail Banking Simulation

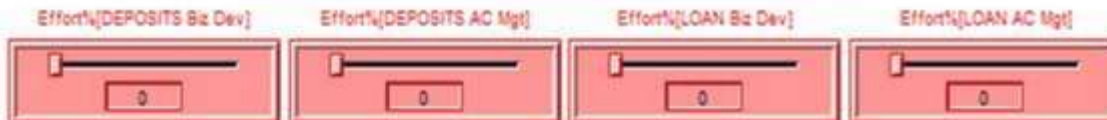
NEW MONTHLY DEPOSITS & LOANS

New Deposits	100	Avg Deposit £K	£5	Deposits £K	£500
New Loans	120	Avg Loan £K	£4	Loans £K	£480

KEY INDICATORS

Average Deposit Term	12	Average Loan Term	36	Early WD Pen Months	3
Deposit Interest %	5%	Loan Interest %	20%	Market Interest %	3%
Withdrawal %	20%	Default %	5%		
Start DEPOSITS	£100.00	Start LOANS	£500.00		

RESOURCE PRIORITISATION DECISIONS



LOAN & DEPOSIT DECISIONS



MONTHLY PERFORMANCE

Total Profit		£19.2	
Total Income	£187.4	Total Costs	£168.2
Loan Income	£186.3	Cust Interest Paid	£21.0
Cust Penalties	£1.1	Loan Costs	£146.7
		Mkt Int Paid	£0.5
Deposits £K	£500.0	Loans £K	£480.0
Early Withdrawal Rate	£91.0	Loan Default Rate	£9.0

CUMULATIVE PERFORMANCE

CUM PROFIT		£209.1	
LIVE DEPOSITS	£5,451.0	LIVE LOANS	£6,046.2
CUM INCOME	£1,227.1	CUM COSTS	£1,018.0
CUM LOAN INCOME	£1,220.1	CUM MKT INT PAID	£5.5
CUM CUST PENS	£7.0	CUM CUST INT PAID	£132.5
LIQUIDITY GAP	£240.0	CUM LOAN COSTS	£690.0

Rules of the Game

1. Every month new deposits and loan applications come into the bank. Loans have already been pre-vetted through credit-scoring.
2. These deposits and loans have specific characteristics such as interest rates, average values, average terms and loan defaults / deposit early withdrawal rates.
3. You have **4 monthly operational decisions** across saving/lending on how much effort you invest in **Biz Dev** to create *more applications* or **Account Management** to *minimise defaults* or *early withdrawals*.
4. You also decide **what % of deposits and/or loans to accept**. Any monthly deposit shortfall versus loans must be made up by borrowing from the market.
5. Profits are calculated monthly. If a loan defaults you will still have the capital cost of the loan for the full loan period but without any income beyond the default date. **The objective is to maximise your profits for the period of the simulation.**

NEW MONTHLY DEPOSITS & LOANS

New Deposits	81	Avg Deposit £K	\$5.0	Deposits £K	\$403.5
New Loans	115	Avg Loan £K	\$4.0	Loans £K	\$541.8

KEY INDICATORS

Average Deposit Term	12	Average Loan Term	36	Cust Deposit Accept %	100%
Deposit Interest %	5%	Loan Interest %	20%	Cust Loan Accept %	100%
Withdrawal %	20%	Default %	5%	Early WD Pen Months	3
Start DEPOSITS	\$100.0	Start LOANS	\$500.0	Market Interest %	3%

Retail Banking Simulation (demo)

Run	Pause	Reset	Setup	Goals	Model	Rules
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Month	13	Simulation Months	13
Index[Economy State]	1.0	Index[Competition]	1.0
Randomiser ON OFF	1	Seasonality ON OFF	0

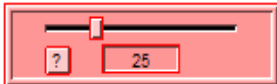
Result
Tables

Note: ALL FINANCIALS in model ARE in €000

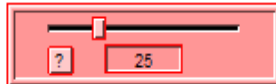
Decision
Record

RESOURCE PRIORITISATION DECISIONS

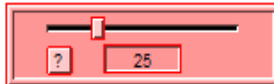
Effort%[DEPOSITS Biz Dev]



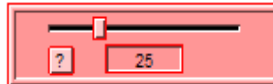
Effort%[DEPOSITS AC Mgt]



Effort%[LOAN Biz Dev]

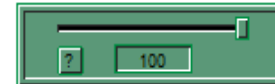


Effort%[LOAN AC Mgt]

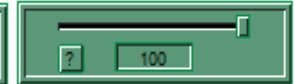


LOAN & DEPOSIT DECISIONS

Deposit Approval %



Loan Approval %



MONTHLY PERFORMANCE

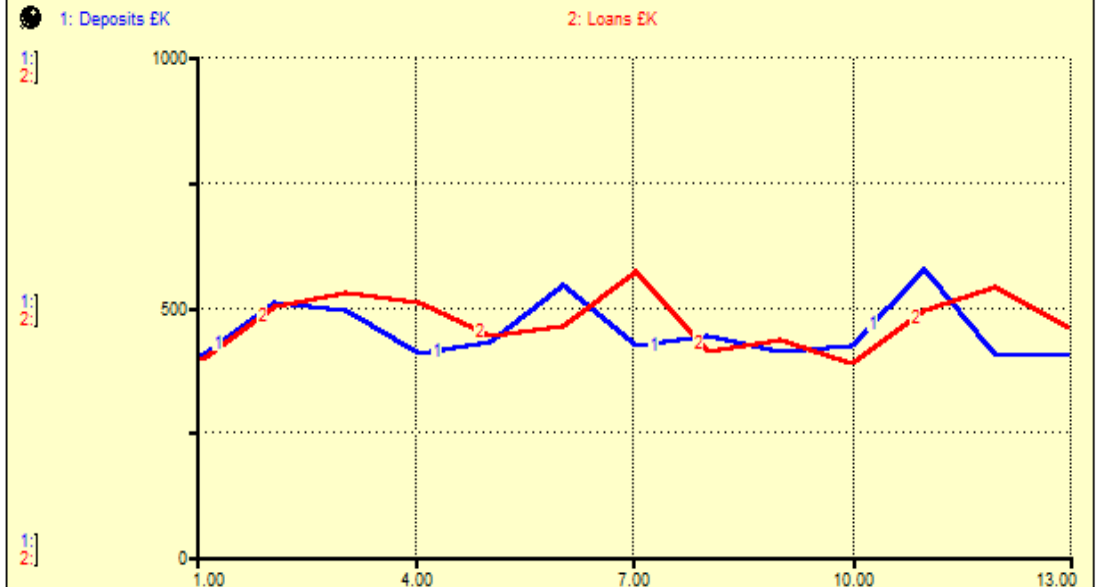
Total Profit	\$18.5
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Total Income	\$183.3	Total Costs	\$164.8
Loan Income	\$182.2	Cust Interest Paid	\$19.4
Cust Penalties	\$1.1	Loan Costs	\$143.2
		Mkt Int Paid	\$2.2
Deposits £K	\$403.5	Loans £K	\$541.8
Early Withdrawal Rate	\$85.0	Loan Default Rate	\$8.0

CUMULATIVE PERFORMANCE

CUM PROFIT	\$217.1
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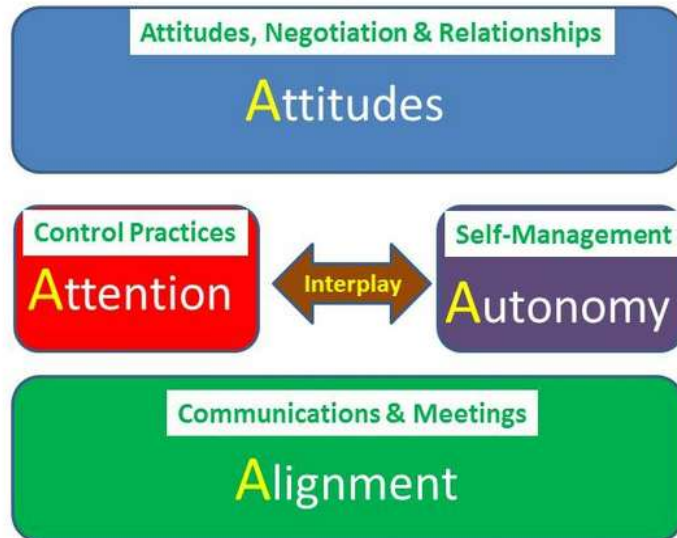
LIVE DEPOSITS	\$4,977.9	LIVE LOANS	\$5,985.9
CUM INCOME	\$1,212.2	CUM COSTS	\$995.0
CUM LOAN INCOME	\$1,205.7	CUM MKT INT PAID	\$6.2



10. High Performance Team Game Simulation

The A⁴ High Performance Team Model

The key elements of each aspect are:



The A⁴ High Performance Team Model

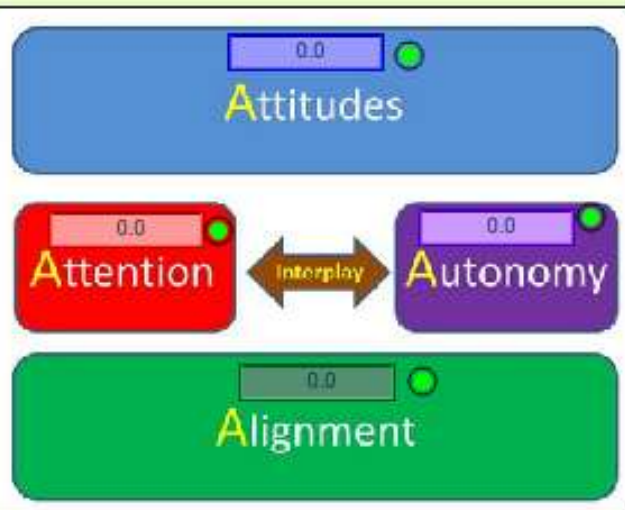
The *presence* or *absence* of each aspect produces...



The A4 High Performance Team Game

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Watch out for positive numbers and red or amber traffic lights on the model diagram - they indicate shortfalls in a particular team aspect. Negative numbers are OK!



Run

Pause

Reset

Sim Run 0

Sim End 0

MAKE NEXT PROJECT DECISION

1 3

About The Model (1)

About The Model (2)

More Information

Setup New Game

MAKE NEXT TEAM DECISION
Activate max 1 aspect per run

SEE THE RESULTS
4 key outcome Areas

Overall Score 0%

A1. Attitude

A2. Alignment

O1. Productivity

O2. Quality

Effort[A1]

Effort[A2]

0%

0%

A3. Attention

A4. Autonomy

O3. Focus

O4. Agility

Effort[A3]

Effort[A4]

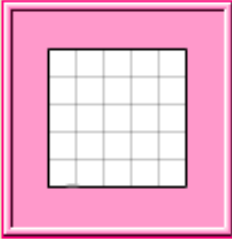
0%

0%

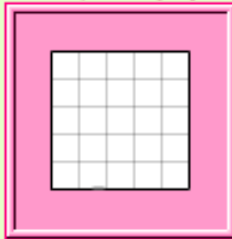
RUN DEMO:

<http://forio.com/simulate/ken.thompson/a4/simulation/#>

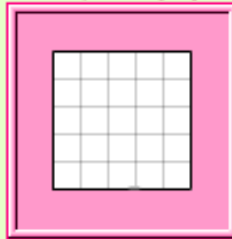
Reqd Level[O1]



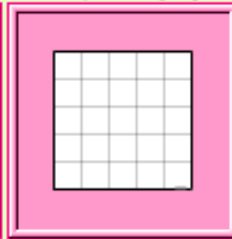
Reqd Level[O2]



Reqd Level[O3]

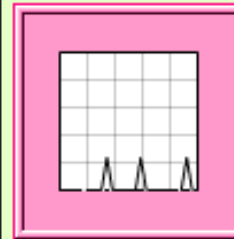


Reqd Level[O4]



STEP1. Adjust the required threshold for each of the 4 team outcomes for each run of the game from 1 to 1.5 with 1 being neutral and 1.5 being very high

Best Decision Profile



STEP2. Setup Profile of the optimum decision (1, 2 or 3) for each Threshold Requirement Change

Impact of Decision A1

Aspect Outcome Matrix[A1,O1]	0.1
Aspect Outcome Matrix[A1,O2]	0
Aspect Outcome Matrix[A1,O3]	0

Impact of Decision A2

Aspect Outcome Matrix[A2,O1]	0
Aspect Outcome Matrix[A2,O2]	0.1
Aspect Outcome Matrix[A2,O3]	0

Impact of Decision A3

Aspect Outcome Matrix[A3,O1]	0
Aspect Outcome Matrix[A3,O2]	0
Aspect Outcome Matrix[A3,O3]	0.1

Impact of Decision A4

Aspect Outcome Matrix[A4,O1]	0
Aspect Outcome Matrix[A4,O2]	0
Aspect Outcome Matrix[A4,O3]	0

STEP3. Adjust the impacts of each of the 4 decision on each of the 4 team aspects. In other words create a 4X4 matrix of decisions and outcomes

STEP 4. You also need to setup the Project Messages

Randomiser ON OFF



Well Done Msgs ON



Shorfall Msgs ON



Project Msgs ON



Home