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Enhancing student learning outcomes with simulation-based pedagogies

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ASSESSING ONLINE BUSINESS SIMULATIONS

www.bizsims.edu.au

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Today's Goals

- Contemplate the major challenges in developing business capabilities
- Explore some of the leading simulations in business
- Discuss how simulation-based pedagogies and assessment can be used to enhance business capabilities



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Challenges in Business Education

- Large cohorts
- How can students develop and practice **business capabilities**?
 - Reports and essays are limited
 - Business plans and case studies not dynamic / interactive
 - WIL experiences often focused on operational skills
 - Exams and MOOCs largely content-based
- Can we provide large cohorts with a learning experience where students sharpen their managerial skills through regular feedback?

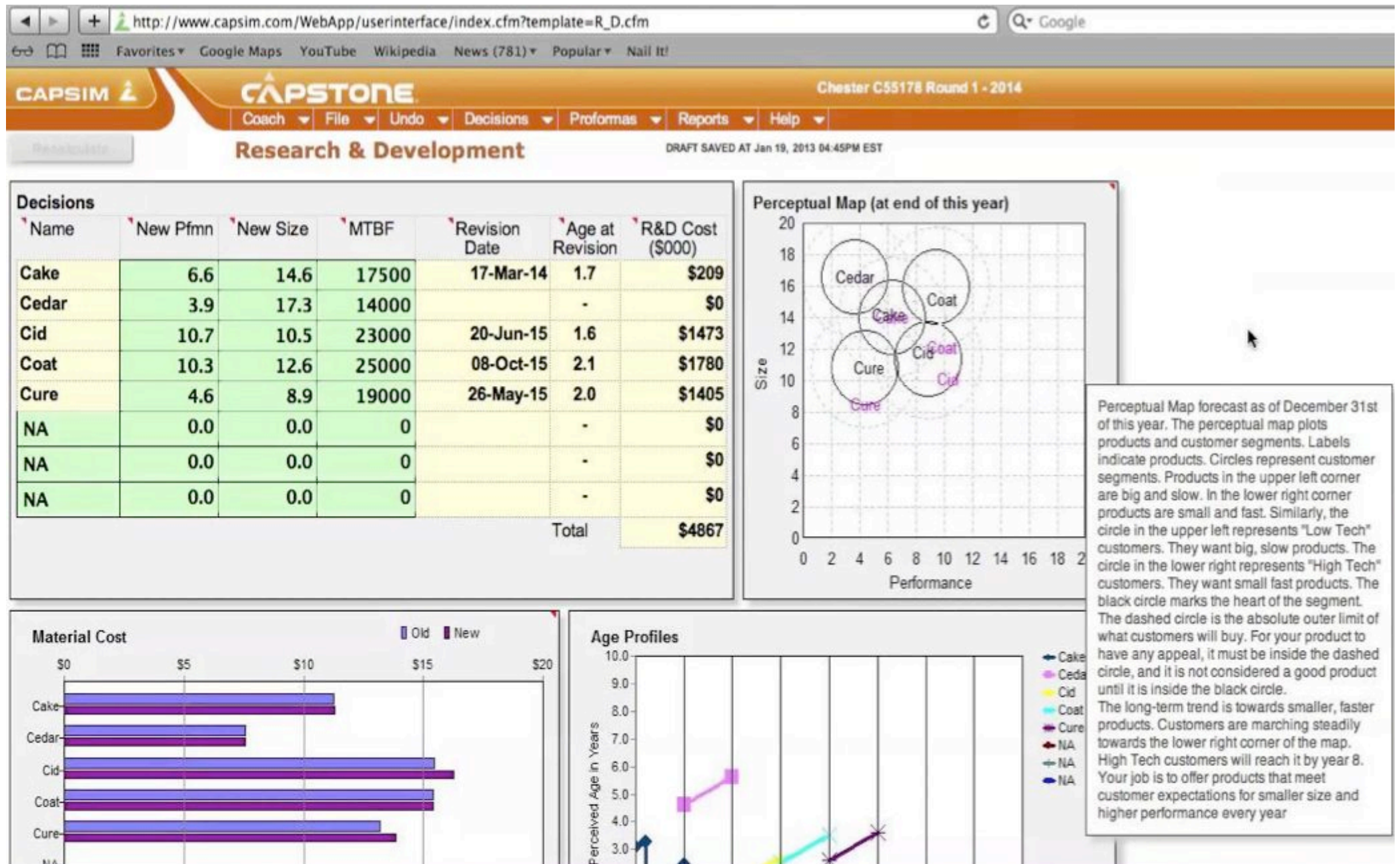
What are Online Business Simulations?

Complex simulations designed to teach strategy, competitive analysis, finance, marketing, HRM, cross-functional alignment, and the selection of tactics to build a successful business.



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Online Business Simulations



KEY CHARTS & GRAPHS

Company scorecard
Company performance
Brand contribution
R & D projects
Messages

Stock market
Company KPI
Brand characteristics
Brand sales & shares

Benchmarking - Overall
Brand awareness
Brand purchase intentions
Market shares
Distribution coverage
Brand map
Perceptual map
Competitive advertising
Competitive sales forces
Market forecast

(check the menu for additional
charts, graphs and tools)

RECENT

Est. ideal characteristics
Ideal value trend
Brand perceptions
Market shares
Shopping habits
Est. ideal characteristics
Semantic vs characteristics
Characteristic estimates

DECISION FORMS

R & D
Brand portfolio
Marketing mix
Sales force
Market research

DECISION TOOLS

Check your budget
Review your decisions
Marketing plan
Check your decisions

ONLINE DOCS

Participant's Handbook
Participants FAQ's
[Close Session](#)

Period: Market:

INFORMATION ON SONITE MARKET - SALES AND MARKET SHARES

Firm	Brand	Volume sold				Retail sales			
		Period 6 U	Period 7 U	Change %	Share %U	Period 6 K\$	Period 7 K\$	Change %	Share %\$
A	SALT	102,554	120,000	+17.0%	6.2%	55,465	66,536	+20.0%	11.0%
	SAH3	104,088	134,211	+28.9%	7.0%	50,360	64,476	+28.0%	10.7%
	SASI	177,600	264,000	+48.6%	13.7%	50,501	74,947	+48.4%	12.4%
	SATO	102,051	192,000	+88.1%	10.0%	24,369	43,847	+79.9%	7.3%
E	SELF	66,874	21,206	-68.3%	1.1%	35,492	11,448	-67.7%	1.9%
	SEXY	103,200	32,788	-68.2%	1.7%	36,153	11,467	-68.3%	1.9%
I	SIBI	50,119	41,482	-17.2%	2.2%	26,891	22,218	-17.4%	3.7%
	SIFU	300,000	315,527	+5.2%	16.4%	68,463	72,091	+5.3%	12.0%
	SIPS	0	192,000	-	10.0%	0	47,025	-	7.8%
O	SONO	84,603	91,045	+7.6%	4.7%	44,535	50,106	+12.5%	8.3%
	SOLE	197,342	50,704	-74.3%	2.6%	52,497	13,399	-74.5%	2.2%
	SODA	167,436	264,000	+57.7%	13.7%	39,192	61,336	+56.5%	10.2%
	SOFA	0	40,800	-	2.1%	0	19,968	-	3.3%
U	SUSI	60,000	120,000	+100.0%	6.2%	18,762	29,356	+56.5%	4.9%
	SULI	30,000	26,730	-10.9%	1.4%	15,354	9,468	-38.3%	1.6%
	SUKO	35,860	14,442	-59.7%	0.8%	17,356	4,807	-72.3%	0.8%
Total Sonite market		1,684,703	1,920,934	+14.0%	100.0%	563,018	602,495	+7.0%	100.0%

		Discount for 3+ Nights	Discount for no breakfast	Discount for non-cancellable	
Weekday Rooms	\$ 140.00	3 %	5 %	8 %	
Weekend Rooms	\$ 120.00	3 %	5 %	8 %	
		Weekend Discount	Rooms	Revenue Split Food	Conf Rooms.
Conferences (per person per 24 h)	\$ 99.00	15 %	25 %	25 %	50 %
Groups	\$ 60.00		40 %	60 %	
Events	\$ 45.00	0 %		50 %	50 %



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AIRLINE Online

Staffing

Aircraft

Financials

Advertising

Airfares

Scheduling

Airports

Service Levels

Analyst

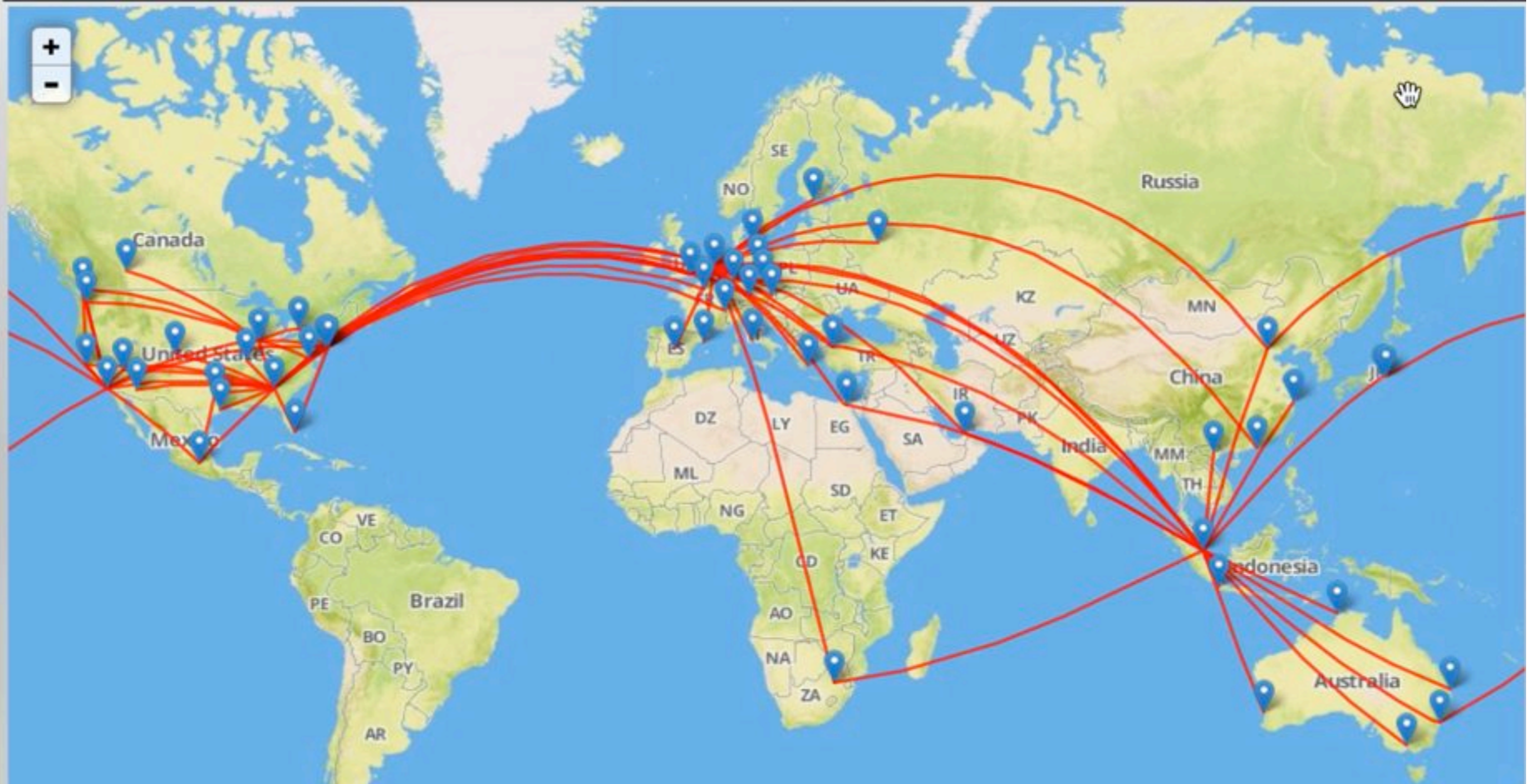
Communications

Export to CSV

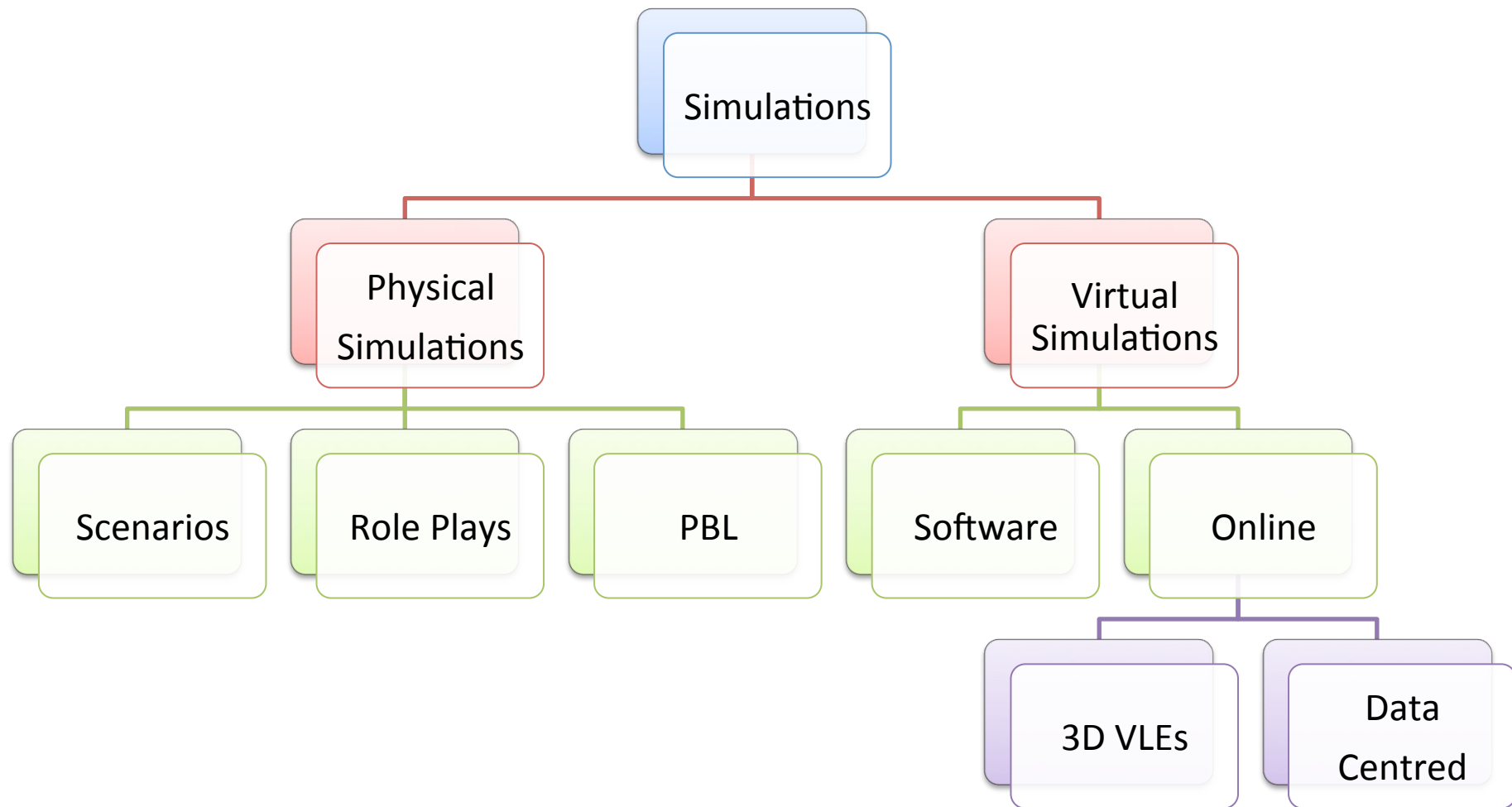
Log Out

☒ Metric

Imperial

UNIVERSALYear:
2017 Q2Bank Account:
\$6,456,197,376.30Bank Loan:
\$0.00Int Paid:
15%Int Rec:
5%Tax Rate:
30%Fuel Price:
\$1.13 /ltr

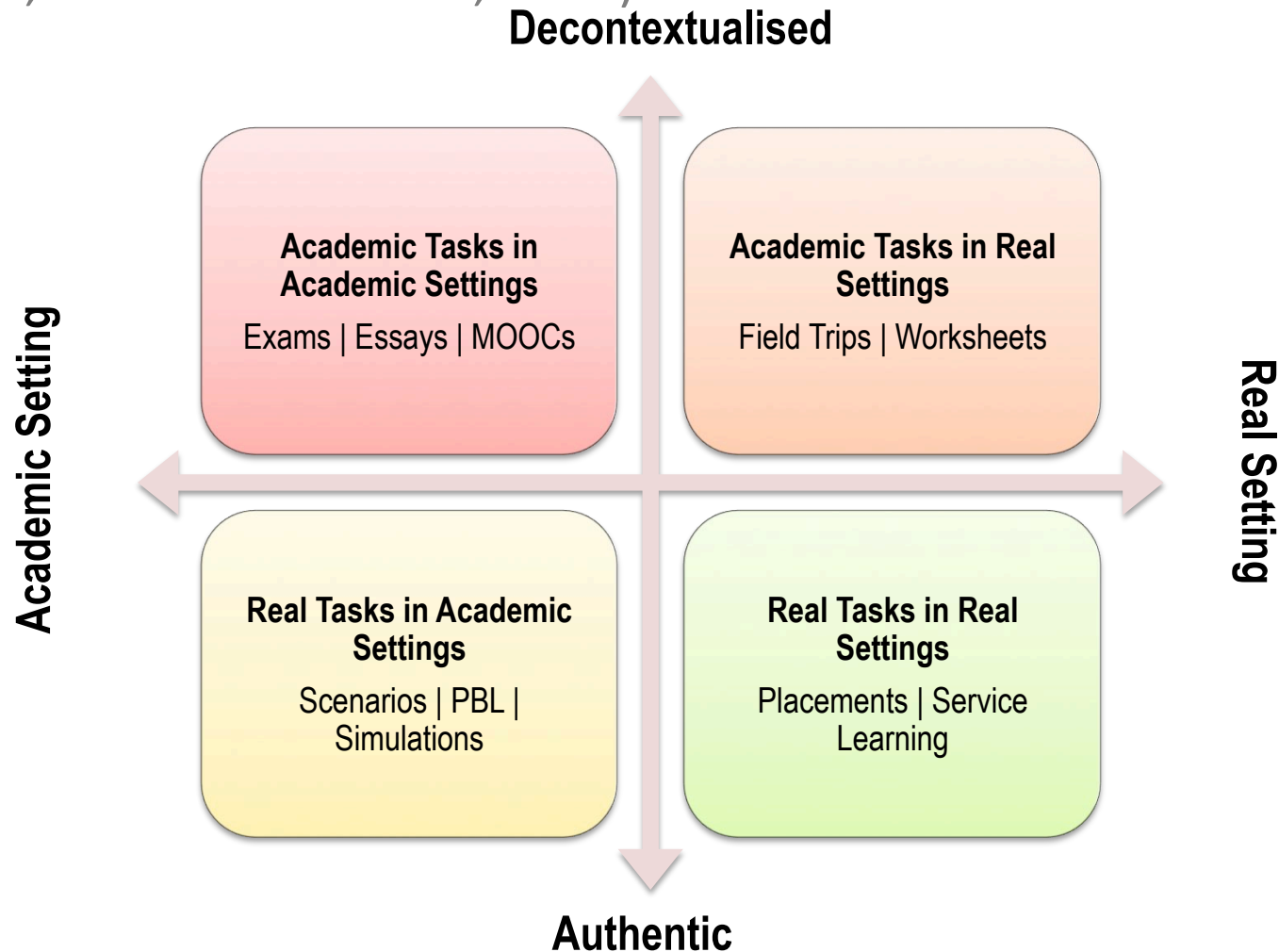
What are Online Simulations?



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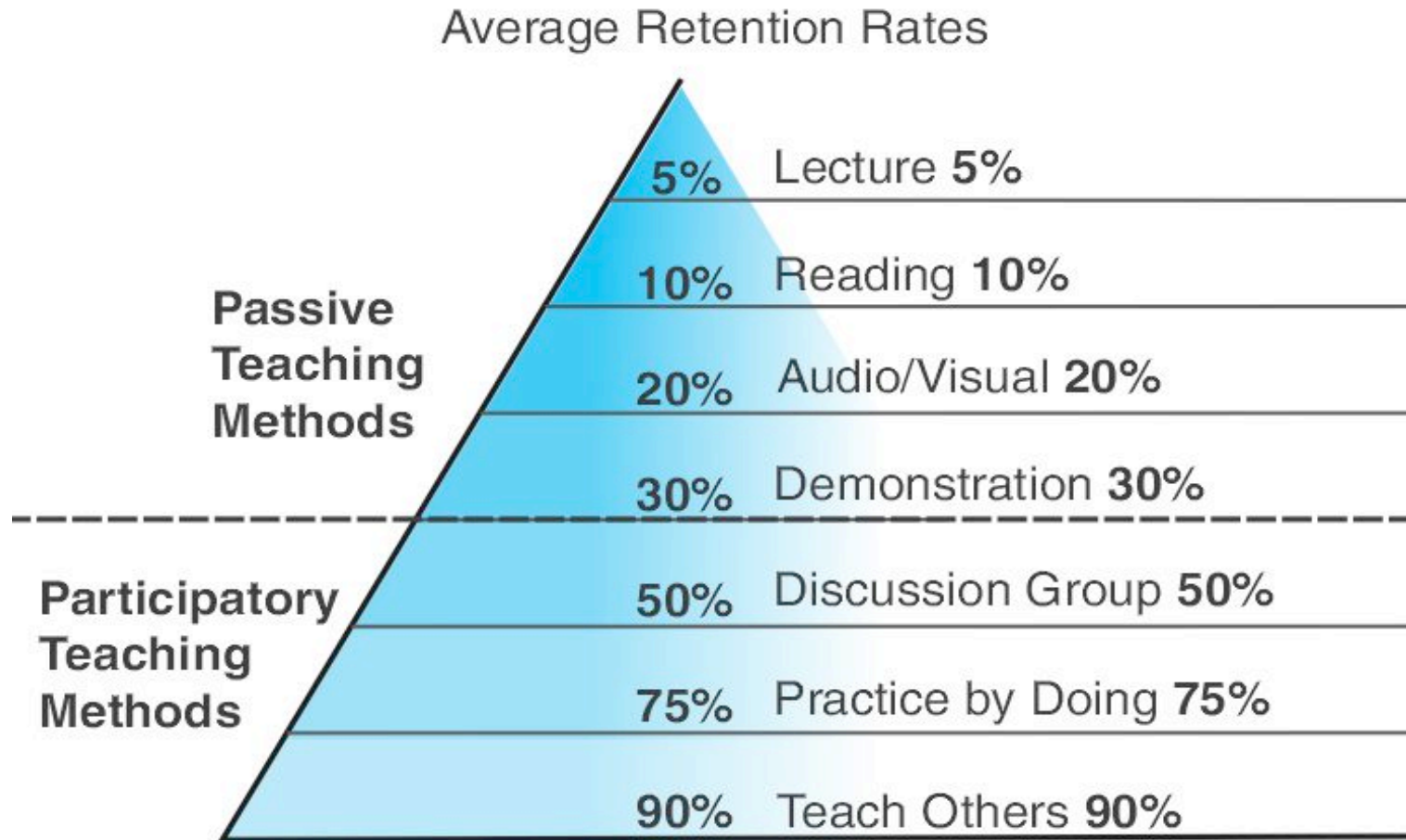
Authenticity Matrix

(Herrington, Reeves and Oliver, 2010)



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Why simulation-based learning?



Adapted from National Training Laboratories. Bethel, Maine



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Why simulation-based learning?

(Biggs, 1999; Feinstein, Mann, & Corsun, 2002; Fripp, 1997)



- Applied to many different disciplines
- A technique (not a technology) to amplify real experiences
- Developing skills in a safe and risk-free environment
- Make errors that do not have real repercussions
- Encourage collaborative learning

Why business simulations?



- Integrate the various elements of running a business
- Experiential/active learning environments that mirror real world problems
- Opportunity for manageable large class capstone learning experience
- Authentic and dynamic team-based learning experiences
- Develop employability skills



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Why online business simulations?

(Adobor & Daneshfar, 2006; Bowness, 2004)



- Apply critical thinking and decision making in a non-linear environment
- Decisions/actions lead to complex and unexpected outcomes
- Develop graduate capabilities and strategic decision making skills
- Continuous feedback to help students understand the outcomes of decisions
- Technology enabled learning available any time, any where



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What do students say about bizzims?



- The best aspects of using simulation is that it is close to a **real life scenario**, but at the same time it allows us to **make mistakes**
- I think it's definitely better than any other course at the uni, because it's **practical** and **you really make something happen** and it's not only about theory
- Sometimes we had **arguments** but in the end we used the data to prove which decision was better



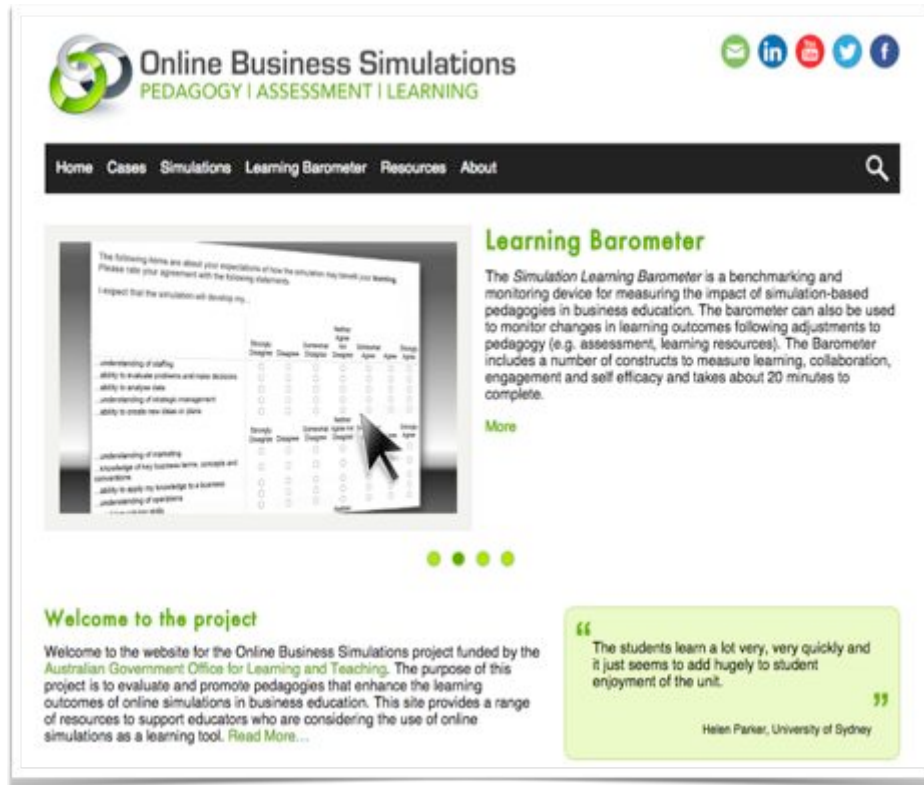
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What do students say about bizzsims?



- We really had to **work closely together** because every decision made by each group member could affect our performance
- Due to the fast pace of the simulation we really develop **problem solving skills** that help us to **make decisions** quickly

Project Aims



- Map the **features** of online simulations.
- Evaluate the contribution of simulation-based **pedagogies** to **student learning outcomes**.
- **Identify** and **promote** innovative **pedagogies** and **resources** for using online simulations as learning tools.
- Assess the **challenges** associated with the integration of simulations into sustainable teaching practice.



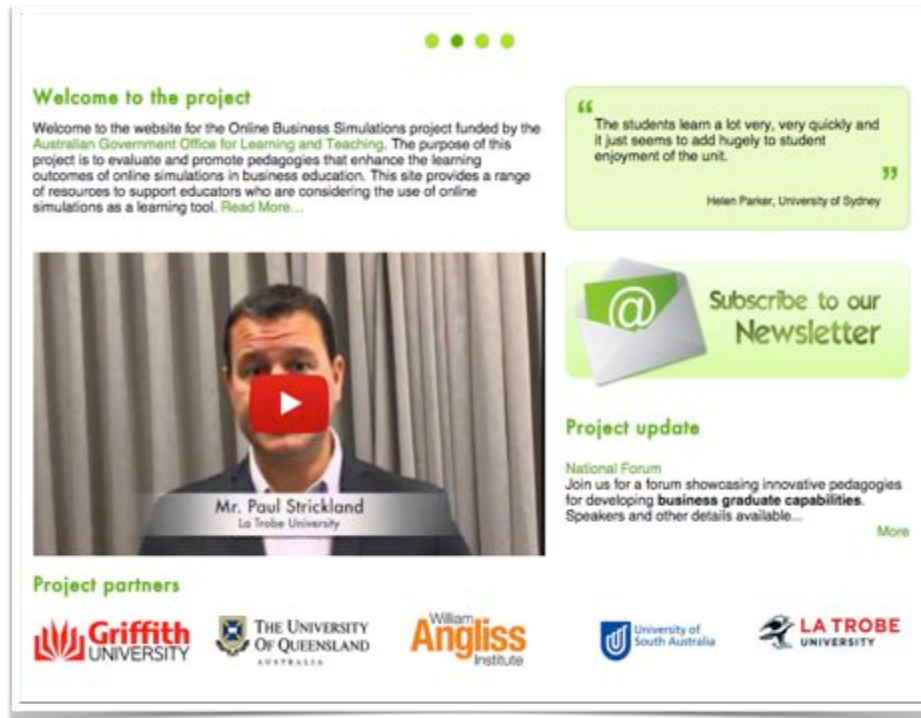
Project Team

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- Paul Whitelaw, Victoria University
- Paul Reynolds, UniSA
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Project Resources



- Simulations Audit
- Simulation Learning Barometer
- Case Studies
- Good Practice Guide
- Website www.bizsim.edu.au
- National Workshops



[Home](#)

AIRLINE Online Business Simulation

Educators

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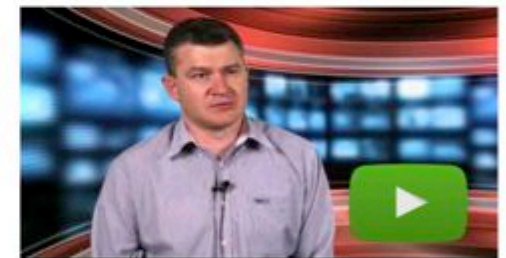
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Key Features

- **Simulator:** AIRLINE Online Simulation
- **Students:** Postgraduate coursework, internal and external students
- **Class Size:** 20-40
- **Assessment:** Business proposal, annual report, reflective blog, business performance (see percentages for each institution [below](#))
- **Pedagogy:** UQ - Flipped classroom (40 x 10-20 minute video lectures, 13 x 2 hour workshops); GU - Intensive delivery of lectures followed by simulation (7 x 3-hour workshops, 50 hours of simulation work).

Background

This case covers the use of the AIRLINE Online simulation using a similar pedagogic approach and assessment regime across two Queensland universities. At the University of Queensland the simulation has been used since 2011 in a masters unit. The simulation is also being used by a postgraduate unit at Griffith University, however most of the case relates to Dr. Lohmann's use of the simulation with undergraduate students at Southern Cross University. Owned by a company called Simulate, AIRLINE Online:



Resources

- [Unit Syllabus \(UQ\)](#)
- [Unit Syllabus \(GU\)](#)
- [Business Proposal Guidelines](#)
- [Business Proposal Rubric](#)
- [Annual Report Guidelines](#)
- [Annual Report Rubric](#)
- [Reflective Blog Guidelines](#)

Do you use simulations at your institution?

Why? Why not?



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Tips for using Simulation Pedagogies

- Map out **expectations** (time, team roles, instructor as a 'guide on the side')
- Give students **time** to learn from trial and error, trials or practice rounds
- Provide **support** (e.g. videos, demos, manuals, flow charts)
- Encourage **collaboration** (e.g. facebook, skype, wikis)
- Align **learning outcomes**
- Use complementary **pedagogies** (e.g. field trips, industry speakers, mentors, cases)
- **Link curriculum** to events in the simulation, use class time for debriefs
- **Assess learning** (not time or effort spent on the simulation)
- Aim for **authentic learning** and assessment (Herrington et al. 2010)



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Authentic online learning environments

(Herrington, Reeves and Oliver, 2010)

1. Authentic context
2. Authentic tasks and activities
3. Expert performances
4. Multiple roles and perspectives
5. Collaborative construction of knowledge
6. Reflection
7. Articulation and presentation
8. Coaching and scaffolding
9. Authentic assessment



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Design an authentic assessment task to
complement an online simulation



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Assessment

Assessment aligned with learning outcomes and simulation tasks

- Team interaction (e.g. peer evaluation, PBL/case, wikis)
- Reports and presentations
 - Proposals or plans
 - Company performance
 - Competitor analysis
- Reflective assessment
- Performance metrics?



Some challenges...

For Educators

- Commercial packages require additional funding
- Steep initial learning curve

For Students

- Time is compressed
- Some variables cannot be simulated
- Students become too engaged
- Not a solution for all team work problems

WE NEED



YOU!



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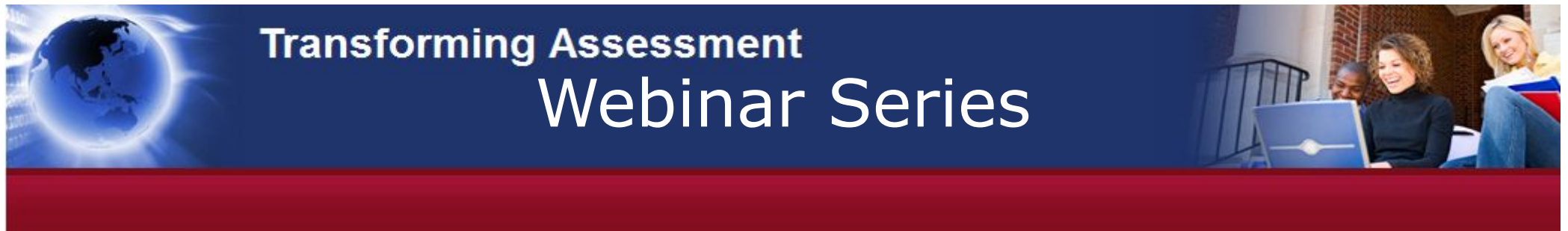
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Session Feedback Survey

With thanks from your hosts

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Recording available

<http://transformingassessment.com>