

Commercial Skills for Chemists: Market Research

Stock Game Student Guide

Developed by Kevin Parker, KKI Associates Ltd in association with and based on an original format of Z/Yen Group Limited

This resource was produced as part of the National HE STEM Programme



Northland Chemicals Stock Exchange Today's Headlines from Doomburg Financial Services

Investors in the recently Independent country of Northland are excited. Five new companies are coming to the new Northland Stock Market (motto "our flotations don't sink") in just one day.

How to play the Game

Your team will be one of 6 teams of bankers¹, who are investing in any or all of 5 new companies on the 'Northland Chemicals Stock Exchange'. The companies are described on the next 5 pages.

You have a (sadly) notional sum of £120,000 to invest at the start of the game. You can invest in any of the companies (or keep the money in cash – the model pays a small amount of interest). You could put all your money into one or two shares or spread the risk. Your investment form, and how to use it, is shown below.

OrangeMan Sacks									
	Start	Green Round 1		Yellow Round 2		Purple Round 3		Red Round 4	
		Allocate your funds in this column	New value of portfolio	Allocate your funds in this column	New value of portfolio	Allocate your funds in this column	New value of portfolio	Allocate your funds in this column	Final Value of your portfolio
Racemix	20,000								
Pigmalia	20,000								
Dieseltree	20,000								
Isaiah	20,000								
PowerCast	20,000								
Total Share Value									
Cash Held	20,000								
Totals	120,000								

OrangeMan Sacks									
	Start	Green Round 1		Yellow Round 2		Purple Round 3		Red Round 4	
		Allocate your funds in this column	New value of portfolio	Allocate your funds in this column	New value of portfolio	Allocate your funds in this column	New value of portfolio	Allocate your funds in this column	Final Value of your portfolio
Racemix	20,000	20,000							
Pigmalia	20,000	25,000							
Dieseltree	20,000	20,000							
Isaiah	20,000	20,000							
PowerCast	20,000	35,000							
Total Share Value		120,000							
Cash Held	20,000								
Totals	120,000	120,000							

Enter your buying decisions in this column
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This team has made its purchases and entered them in the correct column

¹ *Orangeman Sacks, The Royal Blue Bank of Scotland, Credit Weiss, The Red Bank of China, Greenman Brothers, and Yellowstone Group*

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OrangeMan Sacks						
	<u>Start</u>	<u>Green Round 1</u>		<u>Yellow Round 2</u>		<u>Purple Round 3</u>
		Allocate your funds in this column	<i>New value of portfolio</i>	Allocate your funds in this column	<i>New value of portfolio</i>	Allocate your funds in this column
Raceymix	20,000	20,000	13,455			
Pigmalia	20,000	25,000	36,932			
Dieseltree	20,000	20,000	23,909			
Isaiah	20,000	20,000	16,545			
PowerCast	20,000	35,000	41,682			
Total Share Value		120,000	132,523			
Cash Held	20,000					
Totals	120,000	120,000	132,523			

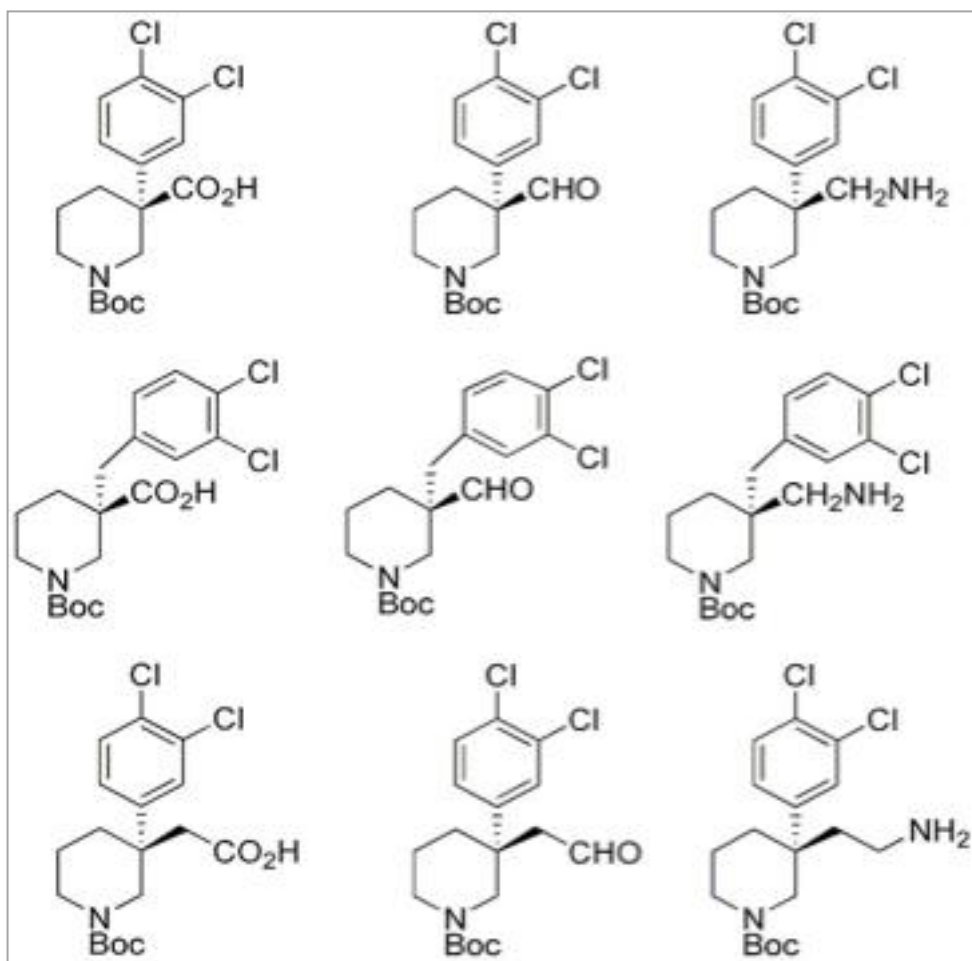
After all the teams have made their purchases, the model generates a new value for the investments

OrangeMan Sacks						
	<u>Start</u>	<u>Green Round 1</u>		<u>Yellow Round 2</u>		<u>Purple Round 3</u>
		Allocate your funds in this column	<i>New value of portfolio</i>	Allocate your funds in this column	<i>New value of portfolio</i>	Allocate your funds in this column
Raceymix	20,000	20,000	13,455	15,000		
Pigmalia	20,000	25,000	36,932	40,000		
Dieseltree	20,000	20,000	23,909	30,000		
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PowerCast	20,000	35,000	41,682	32,523		
Total Share Value		120,000	132,523	132,523		
Cash Held	20,000					
Totals	120,000	120,000	132,523	132,523		

In the next round the team makes investments up to the value of the new amount

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Raceymix Chemicals



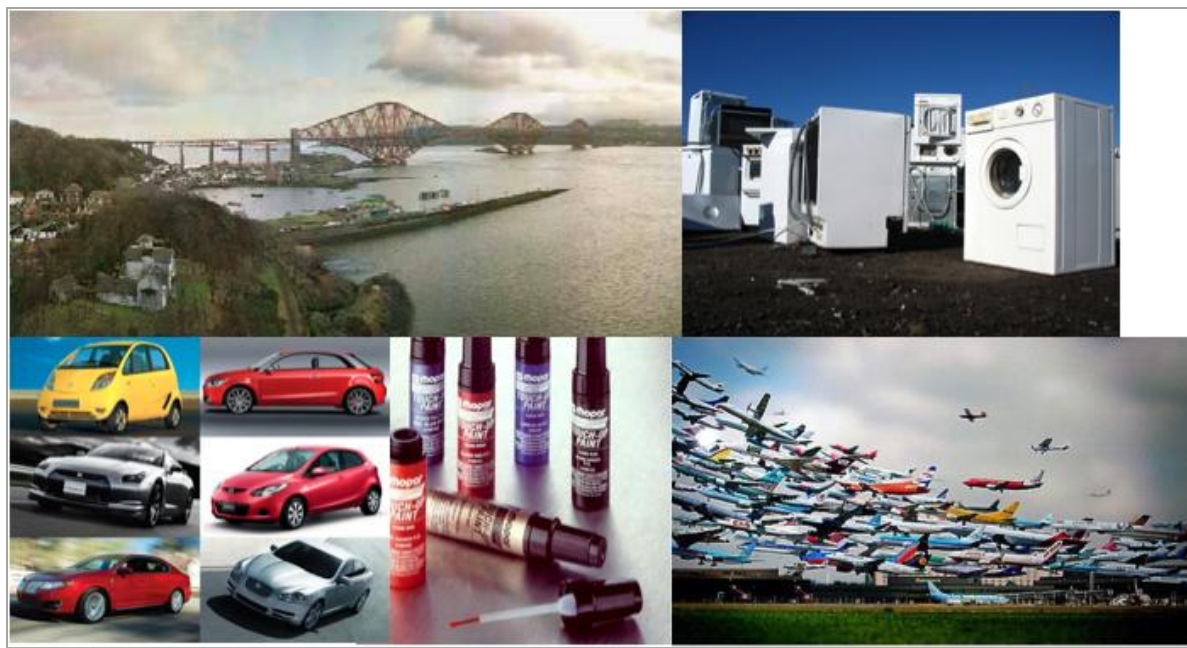
This is a new company, which exploits its own IP, that makes and sells high value-added chemical building blocks and scaffolds to the Drug Discovery industry. The compounds are pharmacologically-preferred, which is to say that they incorporate certain structural features which impart biological activity. It is intended to use proprietary technology to prepare them as single enantiomers. It should be noted that the opposite enantiomer of a given drug usually possesses profoundly different biological and toxicological properties.

The company has a route to a new antibiotic precursor lunacridine, and is very excited about the prospects for this molecule.

Question: Would you invest in this project? If not, why not?

Northland Chemicals Stock Exchange Today's Headlines from Doomburg Financial Services

Pigmalia - the zeolite paint pigment

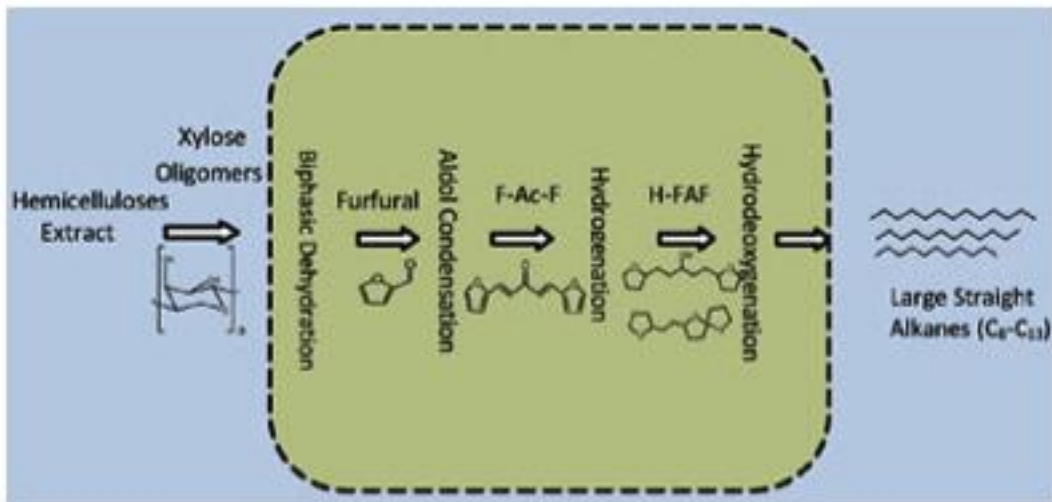


Pigmalia is a zeolite-based paint pigment giving controlled released of active ingredients, especially the very effective anti-corrosive, zinc chromate. It is particularly effective in outdoor applications on steels and aluminum. The world market for paint pigment is \$2 bn. Anti-corrosive paints are used on cars, aeroplanes, oil platforms, bridges, and freezers. Pigmalia need £400,000 for development to move up to 5% of global paint pigment market, i.e. \$100M.

Question: Would you invest in this project? If not, why not?

Northland Chemicals Stock Exchange
Today's Headlines from Doomburg Financial Services

Dieseltree – diesel fuel from Biomass



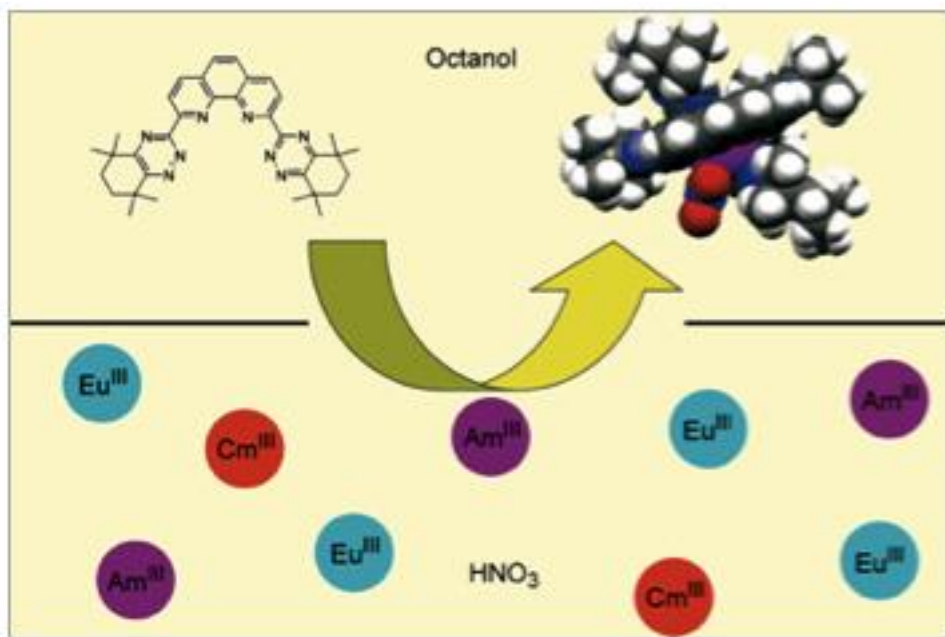
Dieseltree is a revolutionary, new process that produces waste products from timber and pulp processing to manufacture diesel fuels. Sustainable production of fuels has been attempted from non-food biomass and vegetable oils, but these methods only make light alkanes which are too volatile for transport use. Dieseltree uses a four step integrated process which has been shown to convert hemicellulose from hardwood trees to grades suitable for diesel engines and jet fuel. ‘This project could make the vast spruce forests of the Northern Hemisphere into a real resource’, said a Dieseltree spokesperson.

Dieseltree have recently recruited technical and commercial staff, including a number of commercial managers with a background in airline logistics.

Question: Would you invest in this project? If not, why not?

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Isaiah - swords into ploughshares, remediation services



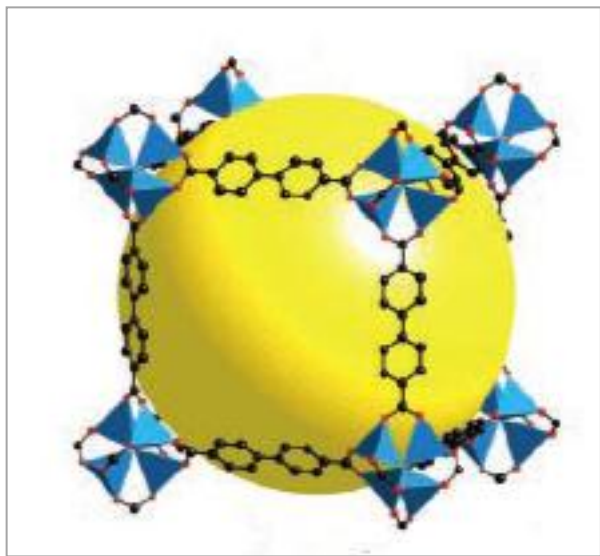
Isaiah is an application of Military technology (originally to counter chemical weapons) which can be used for soil remediation and the clean-up of contaminated land sites. Isaiah technology has been set up to commercialise his expertise. Isaiah has particular expertise in separating heavy metals such as rare earth fission products and high atomic number actinide elements.

Isaiah, which is a Joint Venture between the MoD and Greenfield University, yesterday announced several appointments - 3 top scientists and 5 senior managers will join over the next few months. Isaiah is attempting to raise £3m at this flotation, and plans to open a new office in Beijing in the immediate future.

Question: Would you invest in this project? If not, why not?

Northland Chemicals Stock Exchange
Today's Headlines from Doomburg Financial Services

PowerCast – Methane Oxidation Catalyst



A multi-national team has developed a new catalytic method, which enables the production of methane from methanol. The catalyst facilitates this partial oxidation, which up till now has been thermodynamically feasible but lacked any clear reaction pathway. PowerCast is investigating technology licence opportunities, which it hopes to announce very soon. PowerCast seeks funding for worldwide development.

Recently the PowerCast team has been spotted on a number of business trips to oil fields in Western and Northern Siberia, and also in various ministries in the landlocked ex Soviet Republic of Kazakhstan.

Question: Would you invest in this project? If not, why not?

Northland Chemicals Stock Exchange

Today's Headlines from Doomburg Financial Services

Today's Headline

The new Government minister for industry announced a free trade agreement between Northland and China yesterday. 'We are particularly hopeful that Northland's 'Cleantech' and technology industries will be able to find new markets in China said a spokesman

Raceymix - no competition

Raceymix managers discounted competitive threats to the company yesterday. Pundits have been expecting US/German Chemical Giant Rhodia to announce a chiral process called hydrolytic kinetic resolution. "Rumours of competition from the US can be discounted" said a spokesman "no-one can do asymmetric reductions, dihydroxylations, epoxidations and ring openings as well as us".

Is this good for Raceymix? Why?

Pigmalia – Life begins at Forties

Having successfully raised \$6M in a recent public offering, Pigmalia has just announced the successful completion of North Sea exposure trials. The chief executive of Pigmalia, Ms Russell 'Rusty' Nael, was ecstatic as she exclaimed, "this is great news – if you took something like the Magnus platform out of the water it would be over 800 feet high and that's a lot of anti-corrosive pigment".

Is this good for Pigmalia? Why?

Dieseltree project growth in Germany

The enormous German motor engineering group, Dimeler, is in negotiations with Dieseltree about adapting its market-leading diesel engines to incorporate Dieseltree technology. Apparently the Germans are very concerned about biofuel production. 'We estimate the market requirement to be very high, and we'd like to see that Dieseltree can meet this' said Dr Eyecan Kownt, Dimeler's Head of Technology Foresight.

Is this good for Dieseltree? Why?

Isaiah – Inner Mongolian Interest

A visit by Isaiah managers to Inner Mongolia has been overshadowed by controversial press coverage. Isaiah is hoping to supply materials and equipment as well as design services, including some new ligand separation techniques. Meanwhile the UK Daily Mail has claimed that many Rare Earth mines in China fall far short of Western Environmental standards – should western companies do business with these producers? they ask

Is this good for Isaiah? Why?

PowerCast – 'Sceptics' in North America

Oil producers in North America are sceptical about Federal plans to restrict the flaring of production gas. 'We've been burning the stuff for years and it doesn't do us any harm' said local wildcatter Irma Redneck. 'Its great to see the flares for miles across the prairie.'

Is this good for PowerCast? Why?

Northland Chemicals Stock Exchange

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Today's Headline

The Minister of Energy of Northland today announced a massive expansion in the Government's plans for Windpower generation. 'We want to install another 6000GW of capacity, both on and offshore' said the minister Dee P Green, 'and we plan to close nuclear plants due to worries about toxic waste'.

Excitement as Raceymix goes for New Molecule

Raceymix scientists announced yesterday that a recent Chemistry in Britain Article had confirmed the paucity of antibiotic candidate drug families around the world. Only 2 new types of antibiotic had been discovered since 1958 according to the article. Meanwhile a May 2011 Associated Press article quotes Datamonitor as claiming that the world market for antibiotics is actually falling as existing drugs become less effective.

Is this good for Raceymix? Why?

Pigmalia look all white

Pigmalia have met a number of European White Goods manufacturers at a recent Trade Fair. 'We have visited some of their factories and its fascinating to watch the way they take those flat white panels and form them into whatever shape they like' said Pigmalia engineers Ben D. Coat and Pol E Form.

Is this good for Pigmalia? Why?

Dieseltree fields plantation questions

Dieseltree are purchasing land on which to plant spruce and pine to act as raw materials for their Biomass production. When asked whether this represented field trials for the process, a Dieseltree spokesperson, said 'no not really, I mean they are fields now, but we're soon going to fill them with plantations and we'll look forward to production.'

Is this good for Dieseltree? Why?

Isaiah coming round the mountain

Reports from North America suggest that MolyCorp may be reopening its Mountain Pass rare earth mine. 'We are hoping to work with this major supplier of important magnetic minerals, and who are well placed for exporting to Asia. It could be a mountainous opportunity we mustn't pass up' said a spokeswoman from Isaiah.

Is this good for Isaiah? Why?

PowerCast – landlocked in Asia

PowerCast are visiting central Asia to pursue opportunities for their methane conversion technology. 'I can't tell you where exactly, although it does end in Stan' said an irritatingly cryptic spokesperson, 'but we do think we can add value to their resources, even though they are rather inaccessible'

Is this good for PowerCast? Why?

Northland Chemicals Stock Exchange

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Today's Headline

The Northland Government yesterday announced new incentives to get companies to invest in its high speed rail system. 'We particularly want to look at better ways of powering the rail line,' said a minister, 'we don't just want to rely on fossil fuel transportation, but we don't know whether biofuels will be able to meet enough of our needs.'

Raceymix get Northland Grant

Raceymix yesterday announced interest in their new antibiotic molecule from the Government of Northland. 'We are giving development grants to Raceymix as we consider their antibiotic could be another Vancomycin' said a Scientific advisor. 'We're also concerned about the side effects seen in racemic drugs, and would like to know how big a problem this is' he said in further comments.

Is this good for Raceymix? Why?

Pigmalia take to the air!

Pigmalia are hoping to launch a new pigment range – believed to be a high quality colour pigment for the aerospace industry. 'We are confident that investors will back us when they hear our plans, as we have a really good understanding of the market for colours', said spokeswoman Paula Royd.

Is this good for Pigmalia? Why?

Dieseltree – going soft?

Although Dieseltree was originally designed to process off-cuts from hardwood trees, Dieseltree bosses intend to test softwood materials as well. 'Although we like the high calorific value of things like Brazilian Rosewood" said spokesman Bern D Gibson, 'we do notice a lot of spare spruce trees thrown out every January and that looks like a potential resource for us'

Is this good for Dieseltree? Why?

Isaiah announce North American project

Isaiah are investigating new opportunities discussed in a recent report published by the British Geographical Society. 'There is a lot of interest in mines that could use our technology, including a 466.8 million tonne venture in Quebec' said an Isaiah manager.

Is this good for Isaiah? Why?

PowerCast in USGS deal

PowerCast has concluded a technology co-operation deal with the US Geological Survey. USGS have been investigating reports of 'ice that burns' and wish to assess whether this represents a potential energy source. Reports of gas hydrates have been around for some time and some commentators believe the energy resource is potentially vast.

Is this good for PowerCast? Why?
