

Shellfish Summit 2016



Scottish Shellfish Sector
& Future Development

Introduction

- Summary of industry
- Future capacity
- Look beyond today's issues to 2030
- Consider big blockers
- Sector Strategy – Vision 2030
- Discussion of specifics



Aquaculture - Farming the Sea



- Key aim - sustainability
- If we get it right - we can be farming shellfish on our sites **FOREVER**
- Shellfish farming
 - has a low impact on seabed
 - no inputs to the sea
 - extremely low carbon footprint
 - improves water quality – but relies on clean seas
 - Can co-exist with other marine users
- We are a young industry vs terrestrial farming
- Some great achievements so far

“We must plant the sea and herd its animals using the sea as farmers instead of hunters. That is what civilization is all about - farming replacing hunting.”

Jacques Yves Cousteau

Industry Value



- Not only producing excellent seafood
- We employ 344 - farming sector - rural areas
- Approx. 150 people in VAP
- At least same again in ancillary industries
- Majority of sector is owner operated
- Can be sustained for the long term

Current Tonnages

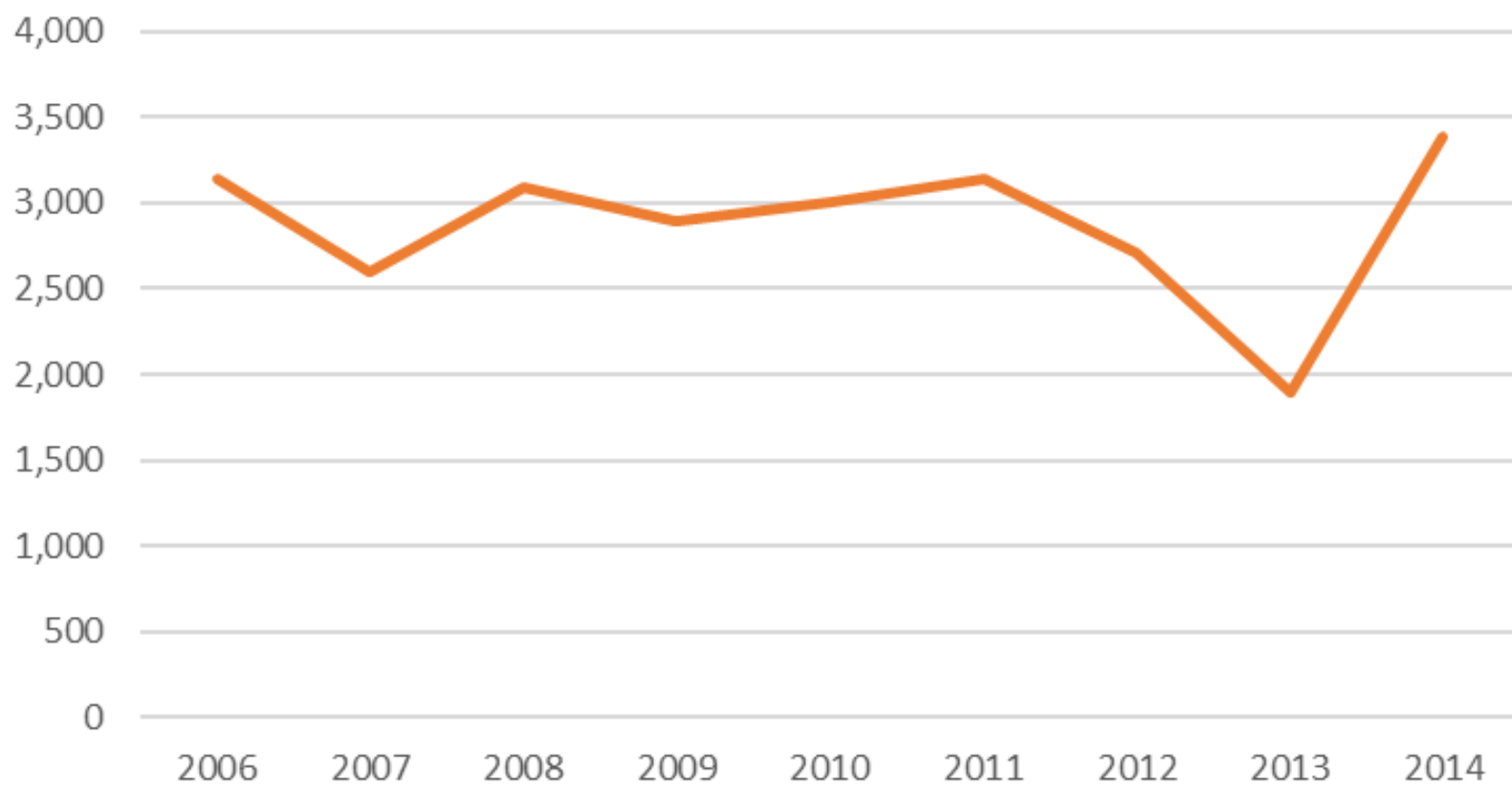
Region	Businesses	Mussel		Pacific oyster		Native oyster		Queen		Scallop	
		(tonnes)		(000s)		(000s)		(000s)		(000s)	
		Tonnes Table	Tonnes on-growing	000s Table	000s on-growing	000s Table	000s on-growing	000s Table	000s on-growing	000s Table	000s on-growing
Highland	48	531	30	1,413	3,930	1	74	1	0	38	136
Orkney	3	0	0	0	0	0	0	0	0	0	0
Shetland	26	5,919	1,133	0	0	0	0	0	0	0	0
Strathclyde	49	822	80	1,953	2,862	241	675	17	500	10	0
Western Isles	18	411	20	26	0	0	0	0	0	0	0
All Scotland	144	7,683	1,263	3,392	6,792	242	749	18	500	48	136
Weight (Tonnes)		7,683	1,263	271		19		1		6	

Oysters



- 2 Species
 - Native (50-100K shells pa)
 - Pacific (2.0-3.5 million pa)
- Cycle length – Native 5-6 yrs & Pacific 3-4yrs
- 15 Operators across West Scotland supply two seafood processors
- Site selection is critical
- Seed issues arisen in past around OHV in supply regions
- Long return on investment & hard work

Oysters ('000 Shells p.a.)

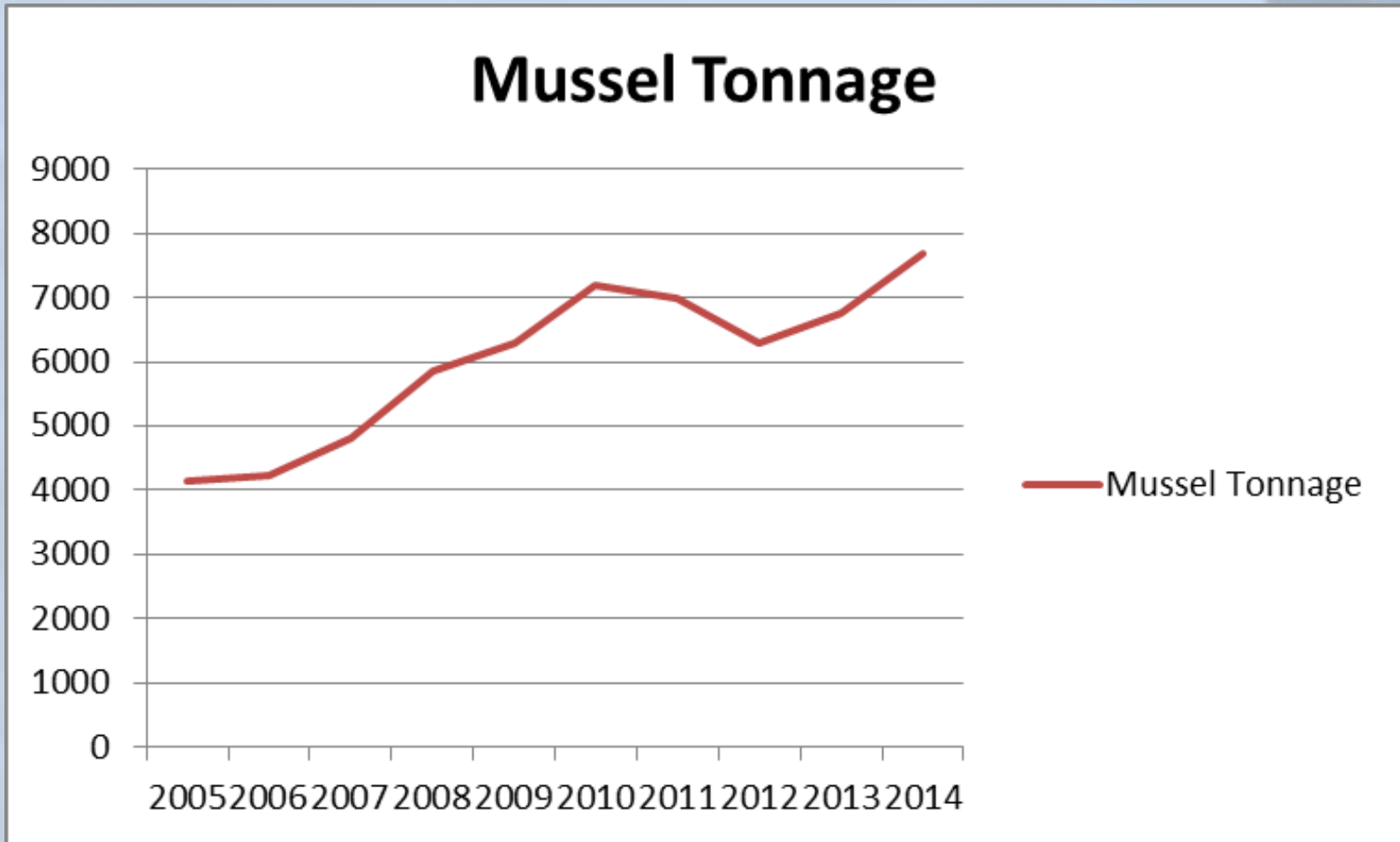


Future Oyster Potential



- Demand for Scottish Oysters is high
- Developments at two farms to increase by 13 million shells p.a
- Two further farms recently gained permission
- Can grow value of this part of sector significantly
- Barriers?
 - Spat
 - Regulation

Mussel Historic



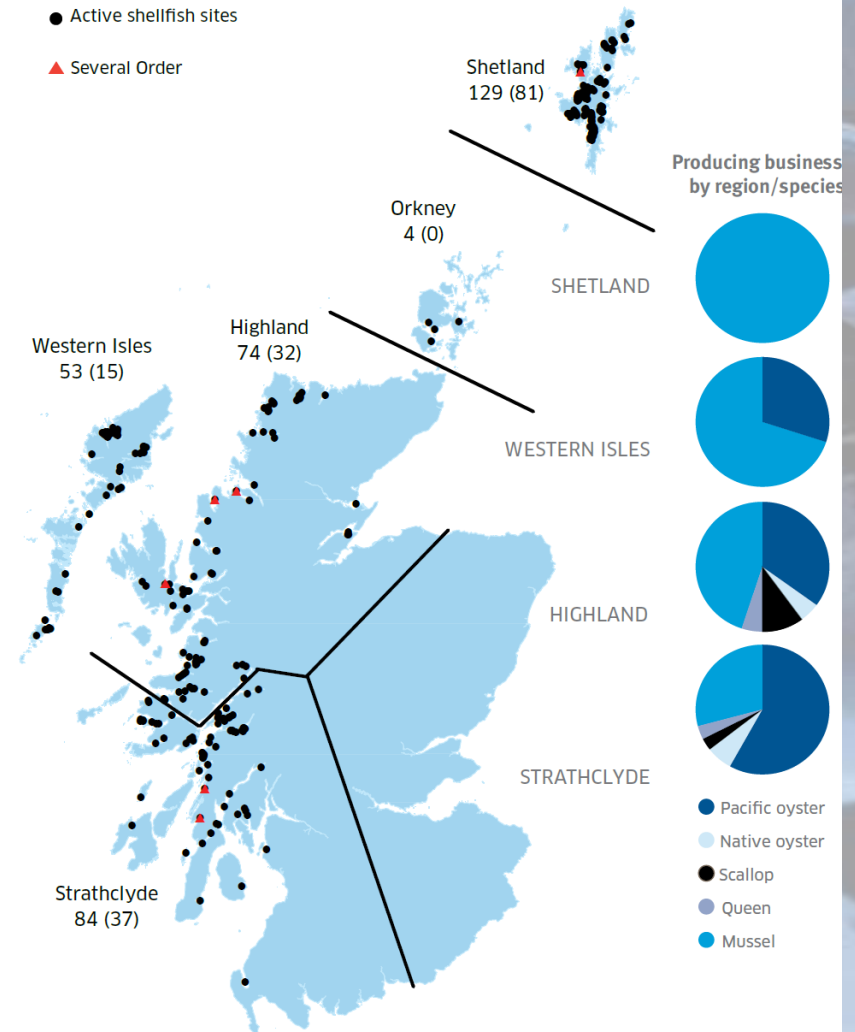
Capacity Per Region

	Total Sites	Producing 2013	LLE m (CE data)
Shetland	129	81	198307
Orkney	4	0	5220
Highland	74	32	70900
Western Isles	53	15	36351
Strathclyde	84	37	91012
	344	165	401790

	% of consented capacity	Potential T @ Shetland average yield	T @ Industry best yield across existing sites
Shetland	49%	5919	11185
Orkney	1%	156	294
Highland	18%	2116	3999
Western Isles	9%	1085	2050
Strathclyde	23%	2716	5133
		11992	22662

LLE (long line equivalent)

FIGURE 2
REGIONAL DISTRIBUTION OF ACTIVE SHELLFISH SITES IN 2014 (NUMBER PRODUCING GIVEN IN BRACKETS) AND NUMBER OF PRODUCING BUSINESSES BY REGION/SPECIES.



To Summarise - sites

- Enough site area to offer a three fold increase
- Shetland at highest % capacity (note not 100%)
 - Positive approach to site licensing > critical mass
 - Local assistance with finance / levered EMFF
 - Great infrastructure
- Large potential in Scotland
 - New sites not scoped / quantified
 - Offshore potential not factored in here
 - Inshore salmon site collaborations not included
- It can happen if framework is right
- So what are the main barriers to development

Big Production Blockers

The background of the slide is a photograph of several mussels in shallow, rippling water. The mussels are dark in color, and their shells are partially open, showing the gills and siphons. The water is a light blue-grey color, and the overall scene is slightly out of focus, creating a soft, naturalistic backdrop for the text.

- **Spat** availability
- **Finance** to equip existing sites
- **Critical mass** in areas – to drive efficiency
- **Infrastructure**

Mitigating the BIG Blockers

The background of the slide is a photograph of several mussels in shallow water. The mussels are dark in color, and their gills are visible. The water is clear and blue, and the overall scene is a close-up of the mussels.

- SPAT
 - Stepping Stone Hatchery Trial
 - Commercial Hatchery/s operational by 2020
 - Better collaboration on caught spat in industry
- Finance
 - status of long term leases as assets
 - targeted loan funding
- Critical Mass
 - Working with LA's to gain critical mass in low production areas
 - Preventing issues like DZR deleting capacity
- Infrastructure
 - Strong Focus on key Infrastructure for logistics and comms

Other Factors – not blockers...

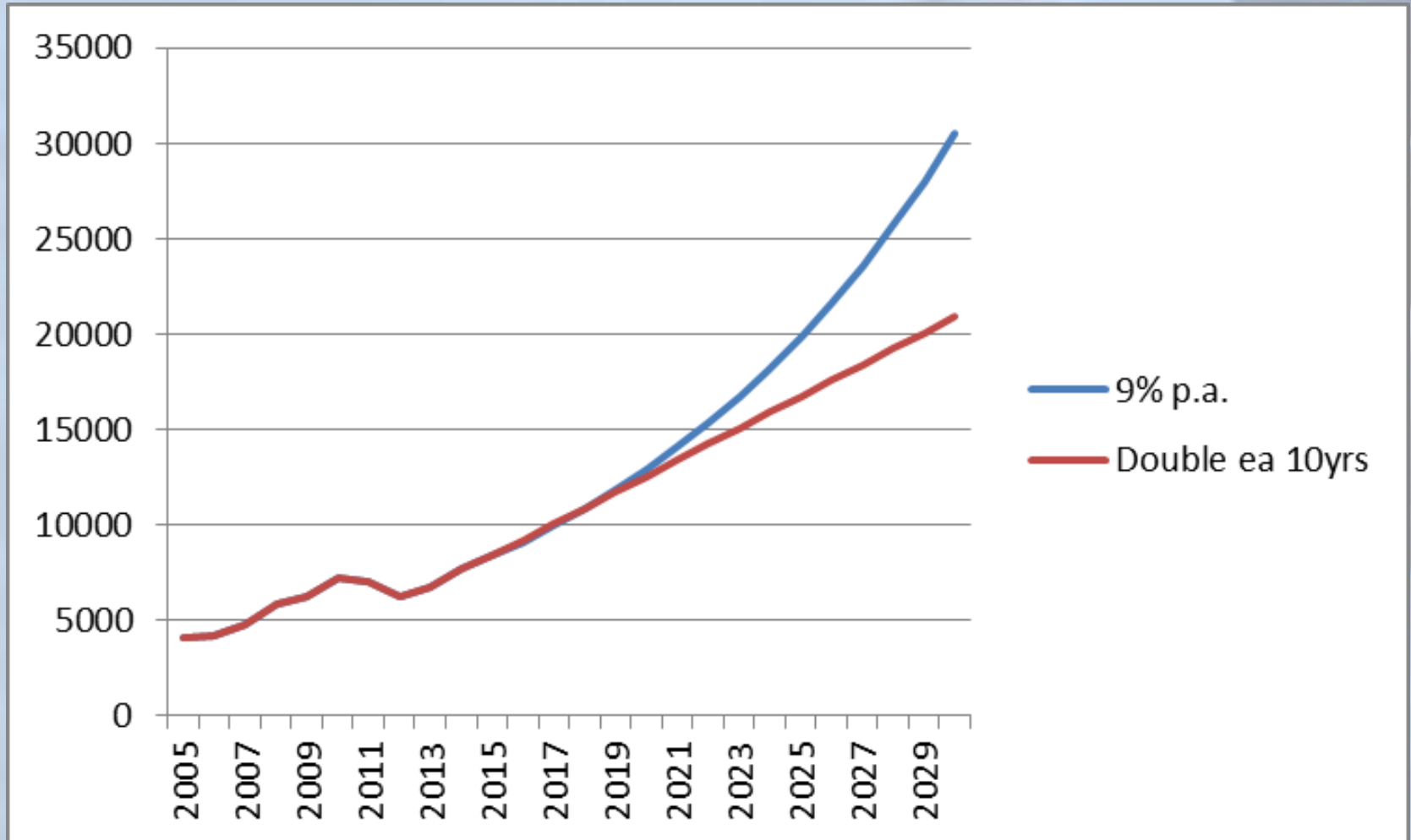
- Enabling Regulation to support our efforts – at all levels
- Knowledge of biology to avoid - quality issues / diseases / alien species / predation / population dynamics
- Water Quality – classifications / RBMP – appropriate classification systems
- Markets / Price points / Cost of Production - How to get from today to 2030 target ‘safely’
- Technical / Customer compliance (becoming more involved over time)

Other Factors cont....

- Industry reputation
- Research (Hatchery, Toxin kits, offshore potential – can it be cost effective & safe?)
- Get 47 shellfish designated areas back to good by 2027

If we get framework right - what is possible for mussels?

Projecting forward



What does good look like - 2030



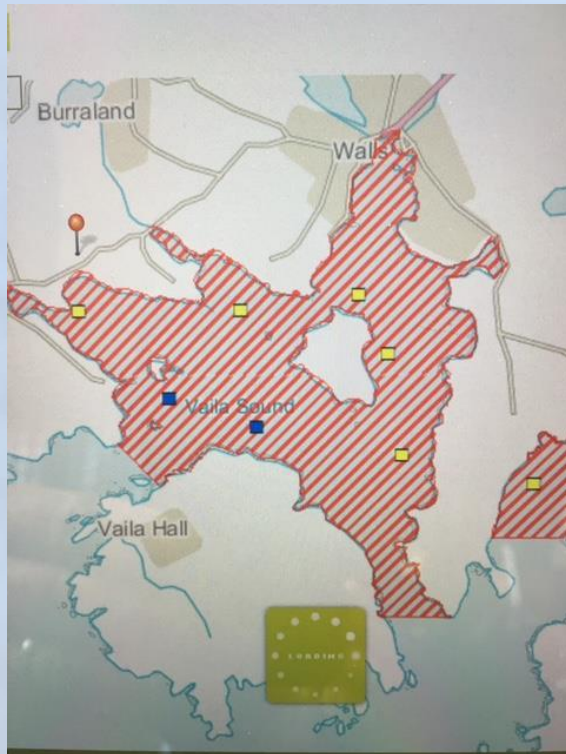
- 21,000 tonnes by 2030
- Balanced across regions
- Employment up – productivity up too
- Commercial hatchery/ies in operation
- Increase in diversification into other species
- Increasing exports significantly
- Profitable, continuing growth profile, demonstrably sustainable, reputation excellent

How can V2030 help?

- Industry is ambitious
- Industry needs to engage
 - Small industry
 - Working hard to talk with a coherent voice – ASSG & Seafood Shetland
- Industry welcomes the high level support for the sector
- But is support matched across all agencies and LA's – are we joined up and can we be? (SEPA, SNH, FSS)
- Are we all committed to trying to reach our potential?

DZR Example

5% of any bay is maximum permitted area to have benthic impact
Each salmon farm to be 0.5km square



Total area of Vaila Sound = 4.9km square

Two salmon sites = 1km square

So at 20% before we even add Shellfish sites – currently there are 5 (0.123km²)

Why 5%? Why settle for these boundary areas? Why include shellfish?

Not been involved with consultation yet

Will cause conflict between salmon and shellfish sites

Directives are not regulations – example of headwind we face - CULTURE

Themes from the Vision 2030

- **Industry leadership and ambition**
- **Enabling and proportionate regulation**
- **Finance**
- **Accelerating Innovation**
- **Skills Development**
- **Infrastructure**

Overall Framework

If we can get this right then, as developers, we can deliver more -

