

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

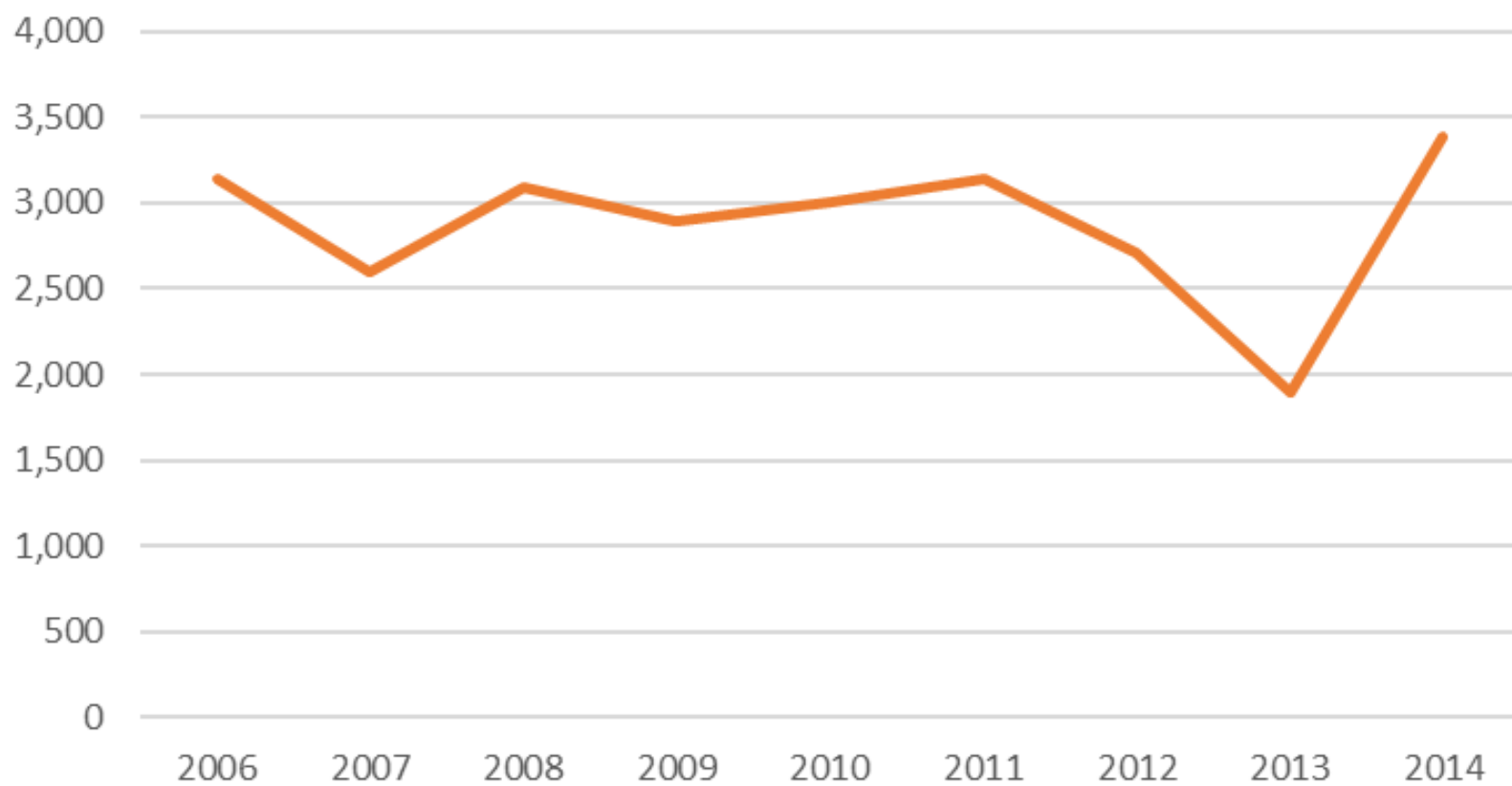
Region	Businesses	Mussel		Pacific oyster		Native oyster		Queen		Scallop	
		(tonnes)		(000s)		(000s)		(000s)		(000s)	
		Tonnes Table	Tonnes on-growing	000s Table	000s on-growing	000s Table	000s on-growing	000s Table	000s on-growing	000s Table	000s on-growing
Highland	48	531	30	1,413	3,930	1	74	1	0	38	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.)

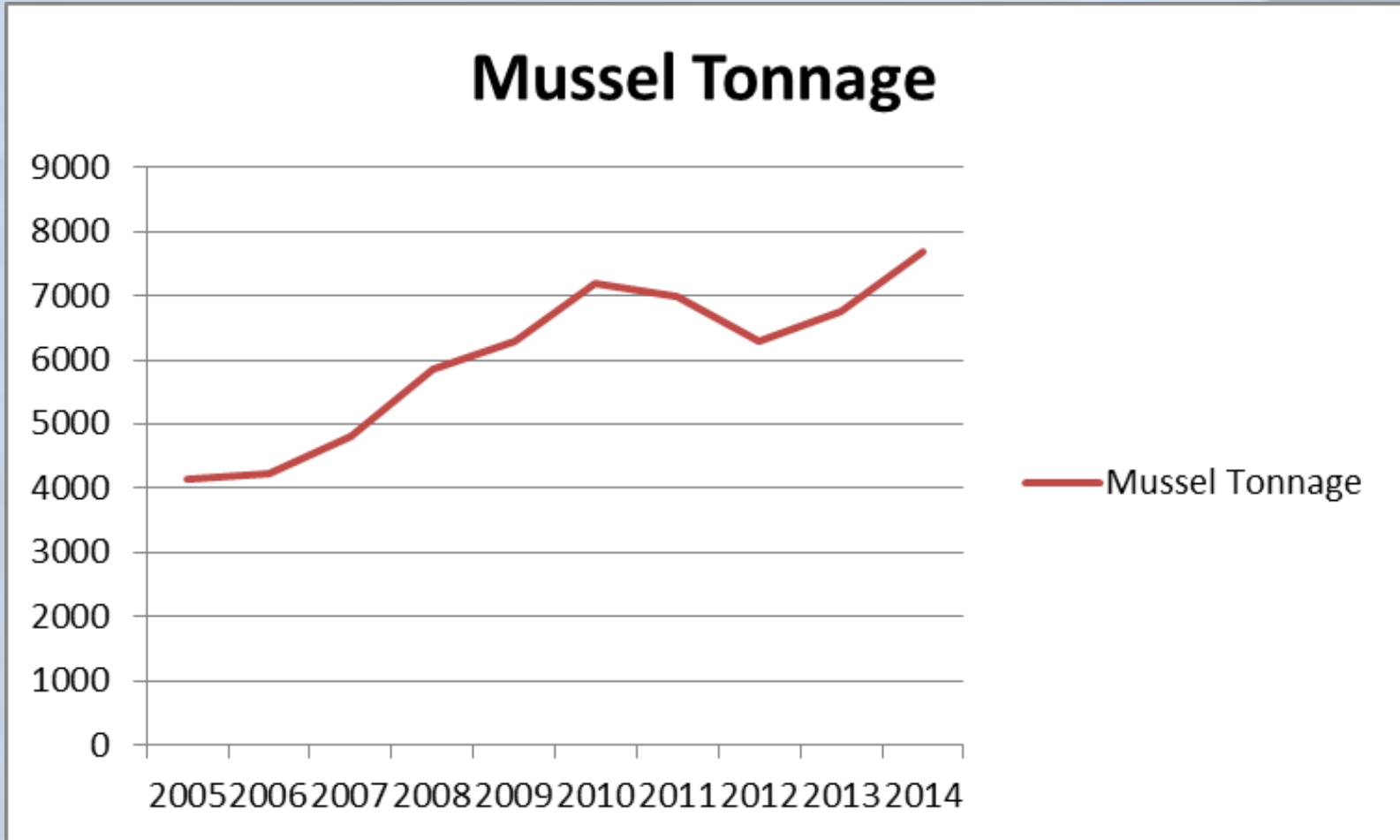


Future Oyster Potential



- 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



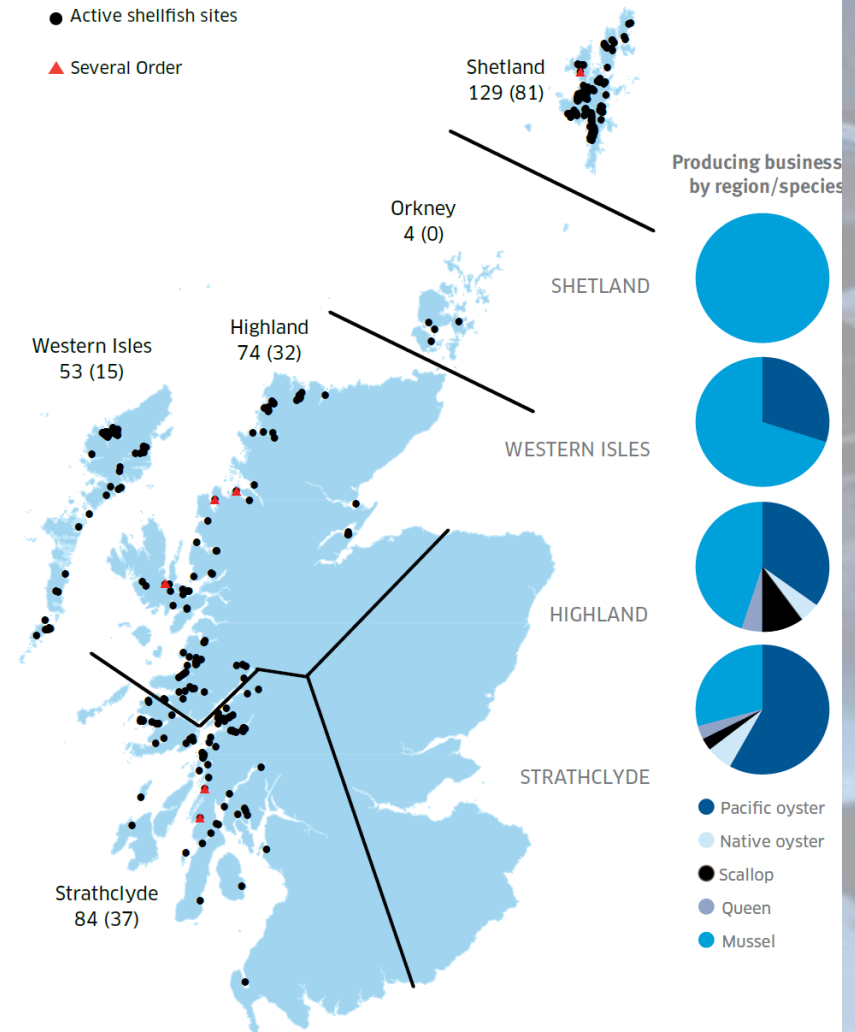
Capacity Per Region

	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 gills are visible. 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 brightly lit.

- 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...

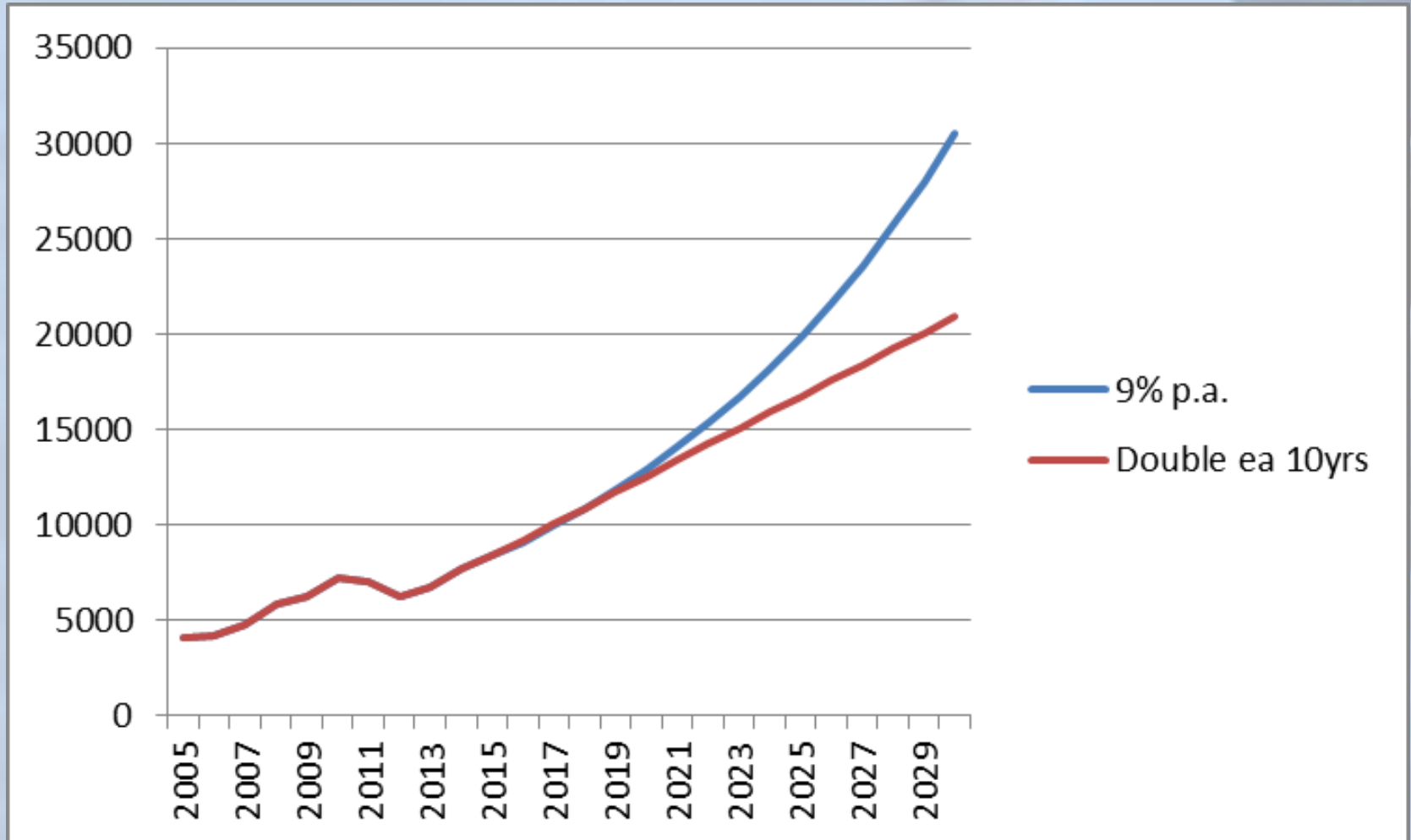
- Enabling Regulation to support our efforts – at all levels
- Knowledge of biology to avoid - quality issues / diseases / alien species / predation / population dynamics
- Water Quality – classifications / RBMP – appropriate classification systems
- Markets / Price points / Cost of Production - How 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

The background of the slide features a close-up, slightly blurred photograph of a mussel shell and other marine organisms, possibly a scallop or another shellfish, resting on a light-colored surface. The lighting is soft, highlighting the textures of the shells.

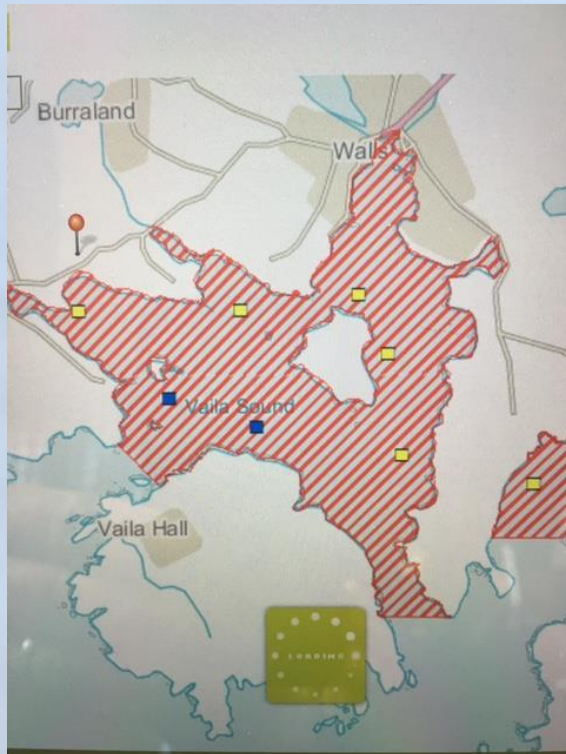
- 21,000 tonnes by 2030
- Balanced across regions
- Employment up – productivity up too
- Commercial hatchery/ies in operation
- Increase in diversification into other species
- Increasing exports significantly
- Profitable, continuing growth profile, demonstrably sustainable, reputation excellent

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 -

