Ningaloo Foundation

Establishing the Exmouth Region as an exemplar of digital innovation that enables WA regions to be livable

Stephen Alexander
DIGITAL VALUE CAPTURE

Addressing the complex problem that is conceded to be wicked in nature that is challenging every region in Australia

To be livable, affordable, desirable, vibrant, clean & managed in a way that underpins each regions values & culture

Within the context of the recognized digital disruption tipping points that will challenge their capacity to survive and prosper

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A Wicked Problem

Professor Brian Collins

The inability to determine the financial sustainability of any infrastructure initiative in today's interconnected world.

He cites a number of contributing dynamics to this wicked problem including:

- the inability to generate sufficient value to each party in order to overcome resistance to change;
- the lack of any holistic comprehension of the interconnected environment that any infrastructure operates within or is connected to; as well as
- an inability to leverage the potential synergistic value between multiple types of infrastructure

Example of exponential change: Energy

- Solar capacity 12 fold increase over last 8 years + ownership shift
- 40% price drop Reverse auction of solar power drops to 2.62 Indian Rupee (0.051 Australian Dollar)
- Solar & storage parity = domestic + commercial
- Customers or their agents will make 20% to 40% of all decisions in the supply system to 2050 ($400B)
- 28% decrease for every doublings of production
- 99% decrease in unit cost since 1975 & 115,000x increase in cumulative insulations
- Block-chain distributed aggregation of demand
- Greenfield & community developers go micro network with potential of no power bills for generation
- Institutional investor sentiment shifting re risk of generation/transmission assets becoming stranded
- Under the Paris Agreement, 80% of all proven fossil fuel reserves become stranded resources and investments

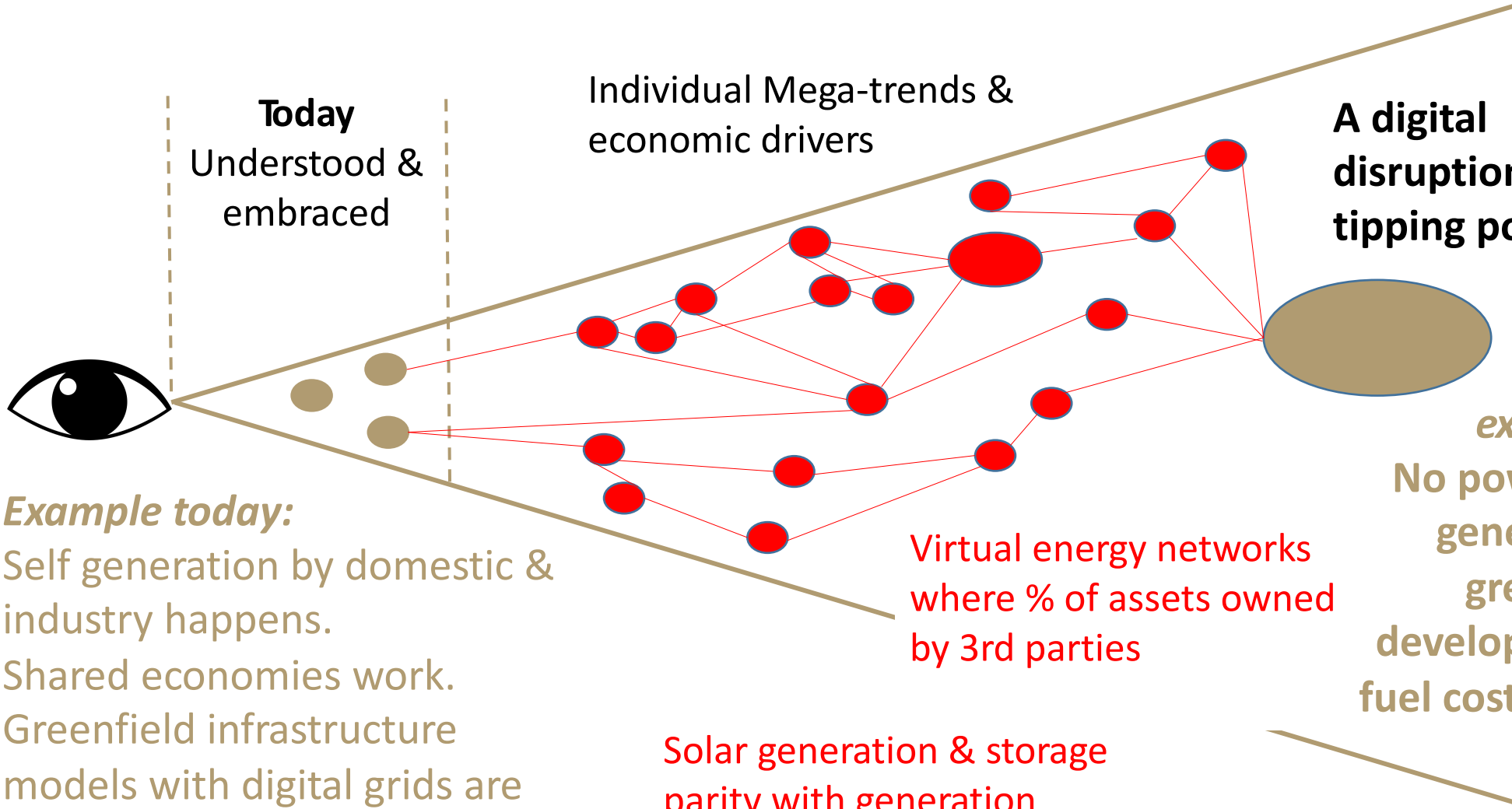
Examples of exponential change: Transport

- Hybrid global corporations owning, insuring, financing & controlling the majority of vehicles in use (as a service)
- More convenient & les cost to share in high density within 8 yrs
- Vehicle asset utilization shifts from 96% time parked to 80% usage
- 1 TeraFlop computer $46m in 2000 to $50 2017 for self drive vehicles
- LIDAR self drive system down from $70k in 2102 to $250
- Demand for self drive = India 86%, China 70% & Brazil 80% - Now

Some characteristics of disruptive tipping points

- Demonstrable pain reduction & increase in meaningful value
- Exponential change in cost, growth in capacity & adoption
- Dramatic optimization
- Follows a typical steep S curve adoption pathway
- Some parties or services get chopped out of the equation
- High synergistic impact between multiple disruptive tipping points
- Higher impact of disruption originating from outside the sector
- Cascading demand via viral marketing & crowd sentiment
- Shorter time frame if demand and supply become aggregated

Defining the synergistic maturity pathways of disruption



Example today:
Self generation by domestic & industry happens.
Shared economies work.
Greenfield infrastructure models with digital grids are lowering bills & productivity costs.

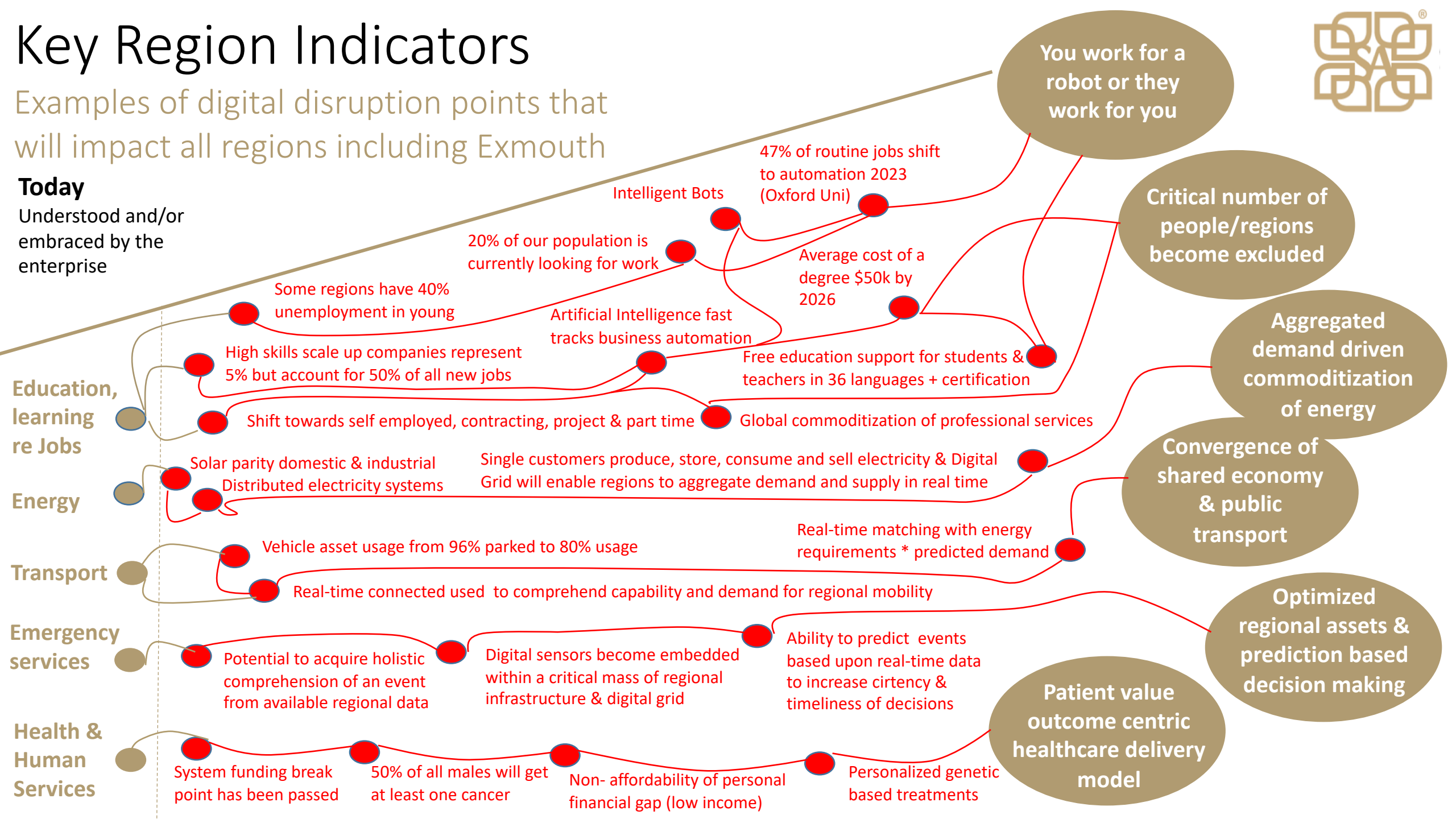
example:
No power bills for generation in greenfield developments & no fuel costs for vehicles

Key Region Indicators

Examples of digital disruption points that will impact all regions including Exmouth

Today

Understood and/or embraced by the enterprise



Journey Roadmap The typical region digital journey

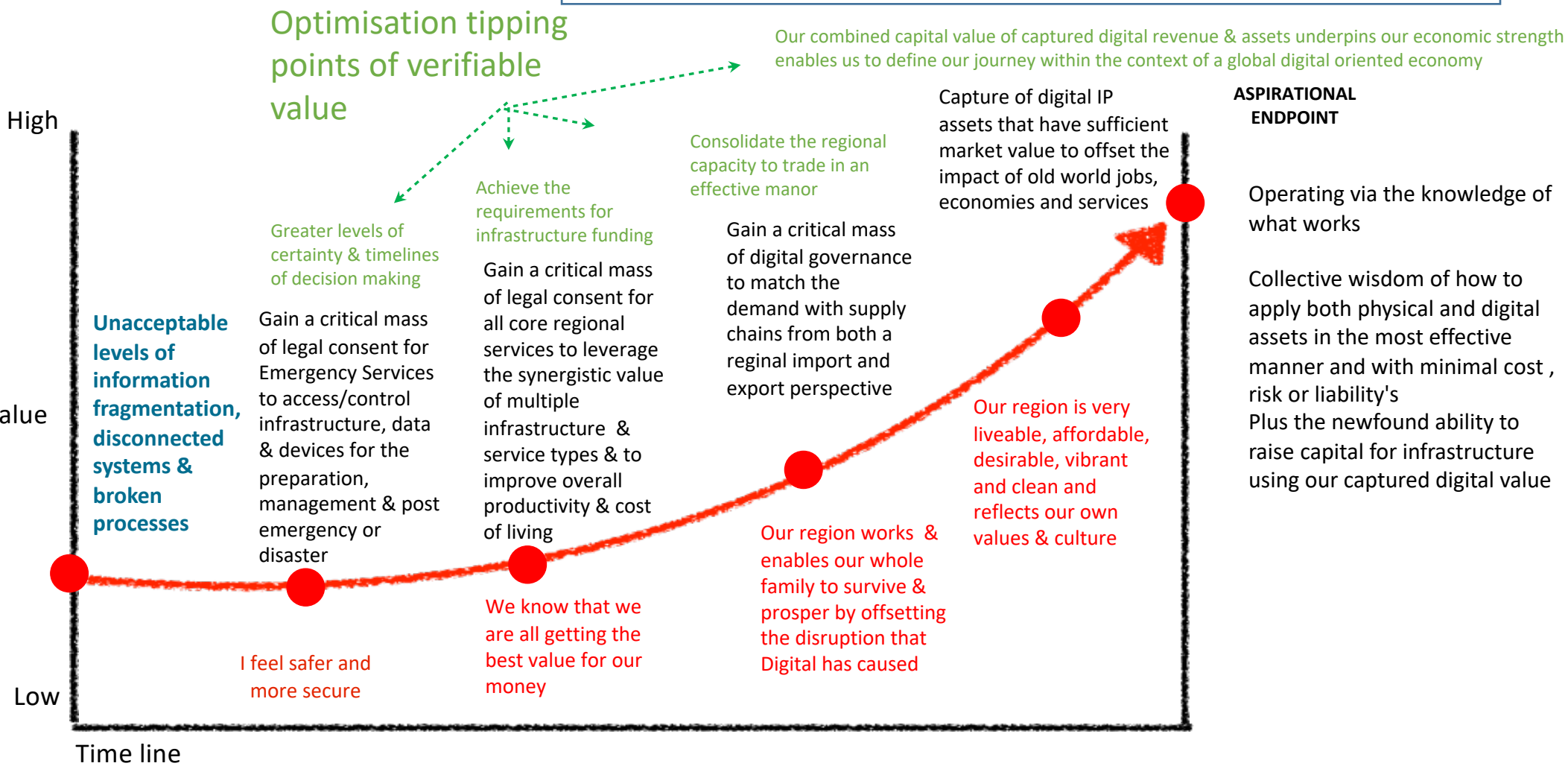
A typical aspirational journey of a region leveraging the value of digital to get a region to where it needs to be recommended model

From the perspective of; Developing a digital governance framework and utilising the existing and evolving various digital communications and networks plus connectivity methods (API) to data, devices, IoT sensors, systems and any data where the appropriate consent to access or control exists

VERIFIABLE VALUE
Measurable & verifiable levels of certainty delivered in a timely manor

Leading to more efficient and effective better decision making.

Including collective policy, planning, management, automation and personal decision making and an increase in the capacity to make informed choices



Journey Roadmap

A typical perspective of the aspirational journey from the emergency services fraternity

From the perspective - Interconnecting the demand and supply of Information with reference to emergency events, generating knowledge, optimising service delivery and generating public value through

VERIFIABLE VALUE
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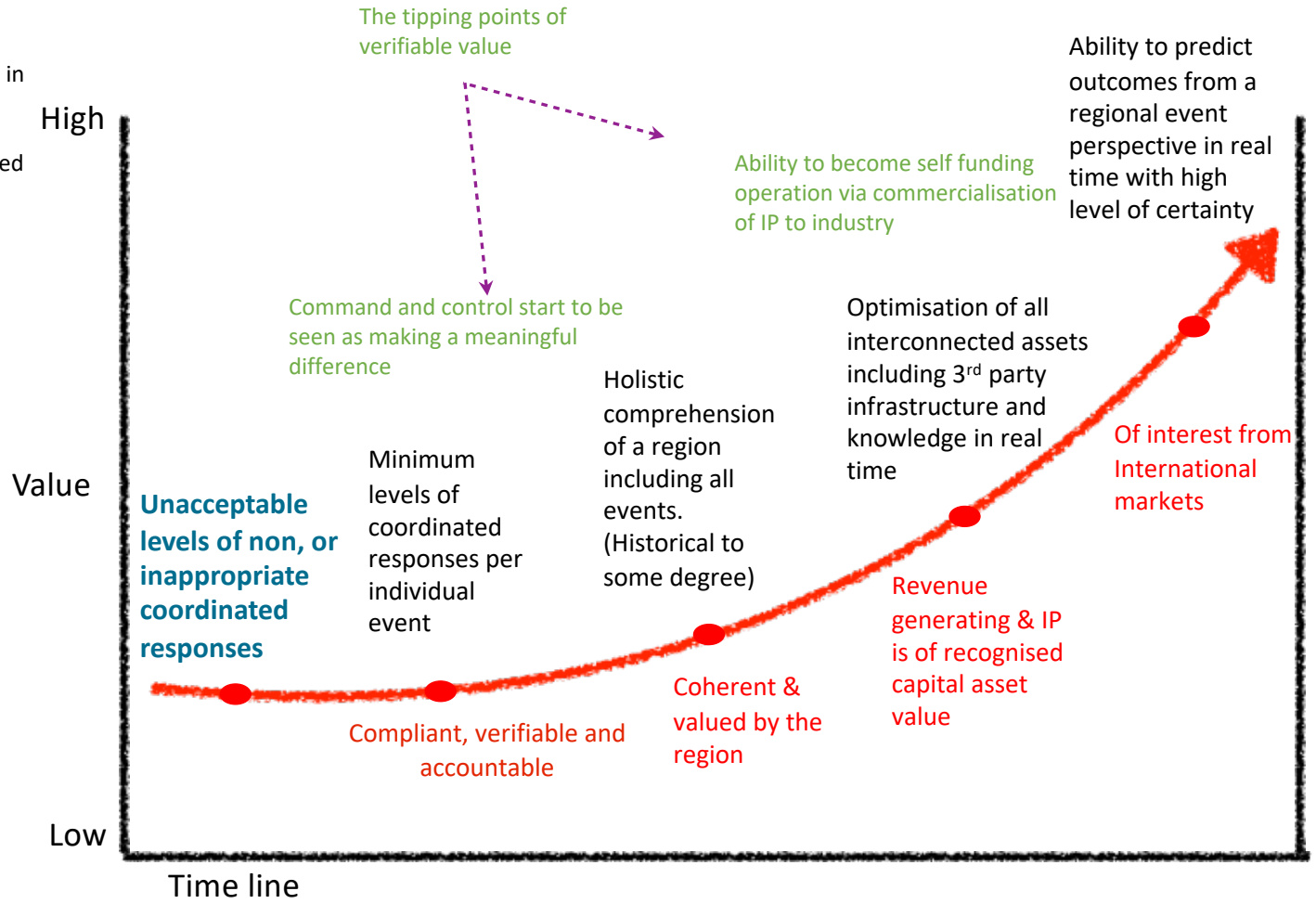
Leading to increased better decision making.

Including policy, planning, event management & automation



ASPIRATIONAL ENDPOINT

Operating via the knowledge of what works

Collective wisdom of how to apply both physical and electronic assets in the most effective manner and with minimal cost and risk

A Day in the life examples.

Exmouth, before, during and after a Cyclone

Green = As is, today

Blue = What they need

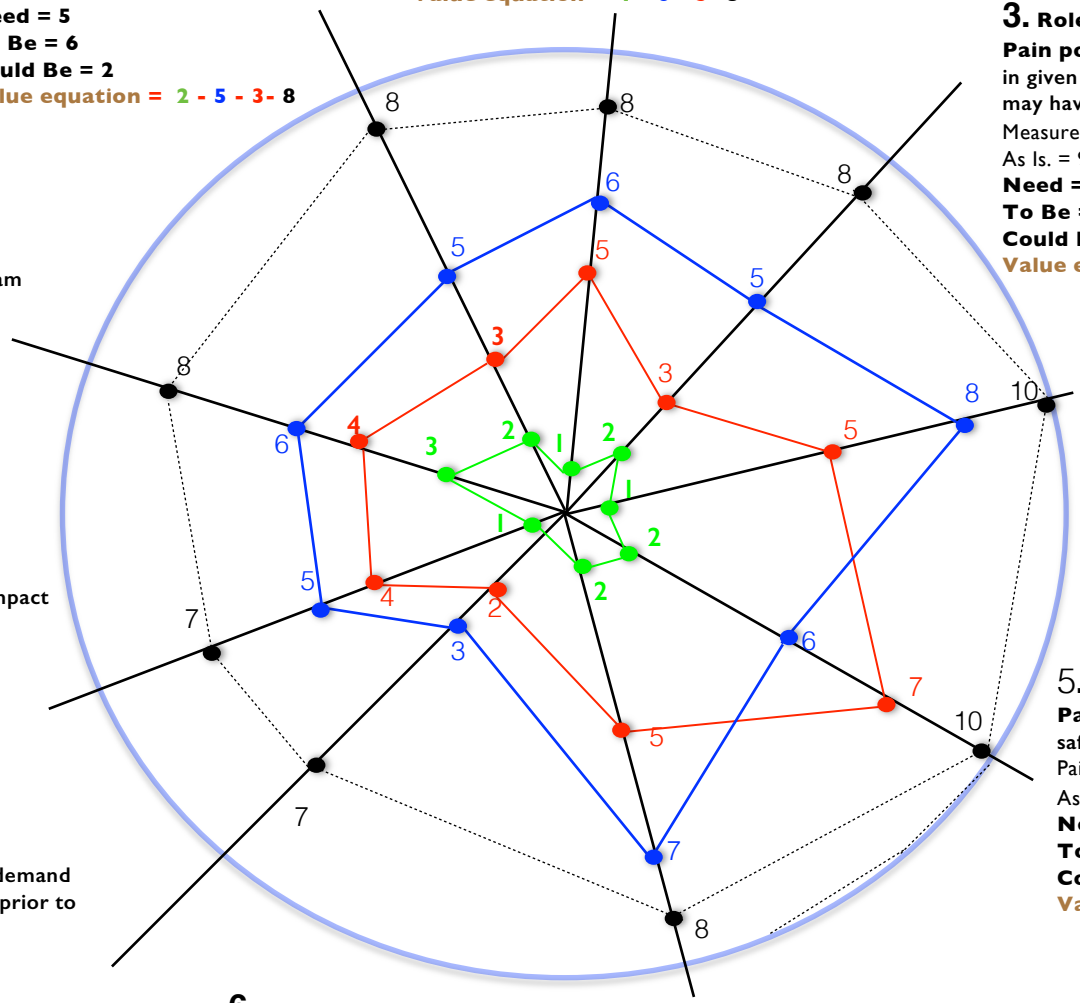
Red = To Be (Consent)

Black dotted = Could Be (Realtime Interconnected)

1. Role = Resident family
Pain point = Food & essentials for 1 baby & 2 children post event
Measurement critter Pain criteria = Stress
As Is = 9
Need = 5
To Be = 6
Could Be = 2
Value equation = 2 - 5 - 3- 8

2. Role = SES Coordinator (Volunteer)
Pain point = Wait time re Hazards status conformation at each home
Measure criteria = Pain Waste of **Time.** As Is = 15 min x 16 = 240h per day - Need = 7min
To Be = 7 mins - Could Be = 1min
Value equation = 1 - 6 - 5- 8

3. Role = Local Police resources coordination
Pain point = Unsure as to how many people are in given locations, who they are, what needs they may have and how to prioritise resources
Measure criteria = Pain of Uncertainty
As Is. = 9
Need = 5
To Be = 7
Could Be = 2
Value equation = 2 - 5 - 3- 8



4. Role = Resident youth
Pain point = Using vehicle to recharge phone
Pain criteria = Lack of information
As Is = 10
Need = 2
To Be = 5
Could Be 1
Value equation =
Value equation = 1 - 8 - 5- 10

5. Role = Motel owner
Pain point = Establishing whereabouts & safety of guests
Pain criteria = **Anaziaty**
As Is = 9
Need = 4
To Be = 3
Could Be = 1
Value equation = 2 - 6 - 7- 10

6 Role = DFMS Commander & Control
Pain point = Efficient & effective decision making re prioritising all regional resources & assets including digital as events unfold
Pain criteria = **Optimisation.**
As Is = 9 - Need = 3- To Be = 5 - Could Be = 2 -
Value equation = 2 - 7 - 5- 8

7. Role = General Practice manager
Pain point = Little visibility of pending demand for GP services or information for triage prior to admissions
Pain criteria = **Predictability**
As Is = 10
Need = 7
To Be = 8
Could Be = 3
Value equation = 1 - 3 - 2- 7

8. Role = Shire of Exmouth Coordinator
Pain point = No overall perspective of impact
Pain criteria = Lack of comprehension
As Is = 10
Need = 5
To Be = 6
Could Be = 3
Value equation = 1 - 5 - 4- 7

9. Role = Horizon Power Response Team
Pain point = Lack of information
Pain criteria = **Predictability**
As Is = 8
Need = 4
To Be = 6
Could Be = 2
Value equation = 3 - 6 - 4- 8

Definition of a Smart Region “Acid Test” = Not stupid

- **Definition of stupidity**
  - lack of intelligence, understanding, reason, wit or sense.
  - Stupidity may be innate, assumed or reactive & a defense against grief
- **Laws of stupidity**
- *The probability that a given person is stupid is independent of any other characteristic possessed by that person.*
- *A person is stupid if they cause damage to another person or group of people without experiencing personal gain, or even worse causing damage to themselves in the process.*
- *Non-stupid people always underestimate the harmful potential of stupid people; they constantly forget that at any time anywhere, and in any circumstance, dealing with or associating themselves with stupid individuals invariably constitutes a costly error.*
- *A stupid person is the most dangerous type of person there is.*