



CIVILIZATION AT THE POINT OF INFLECTION: IMAGINING THE POSSIBILITIES AHEAD THE UNEASY JOURNEY FORWARD?

Keynote at
China America Innovation Network
JULY 27TH 2019

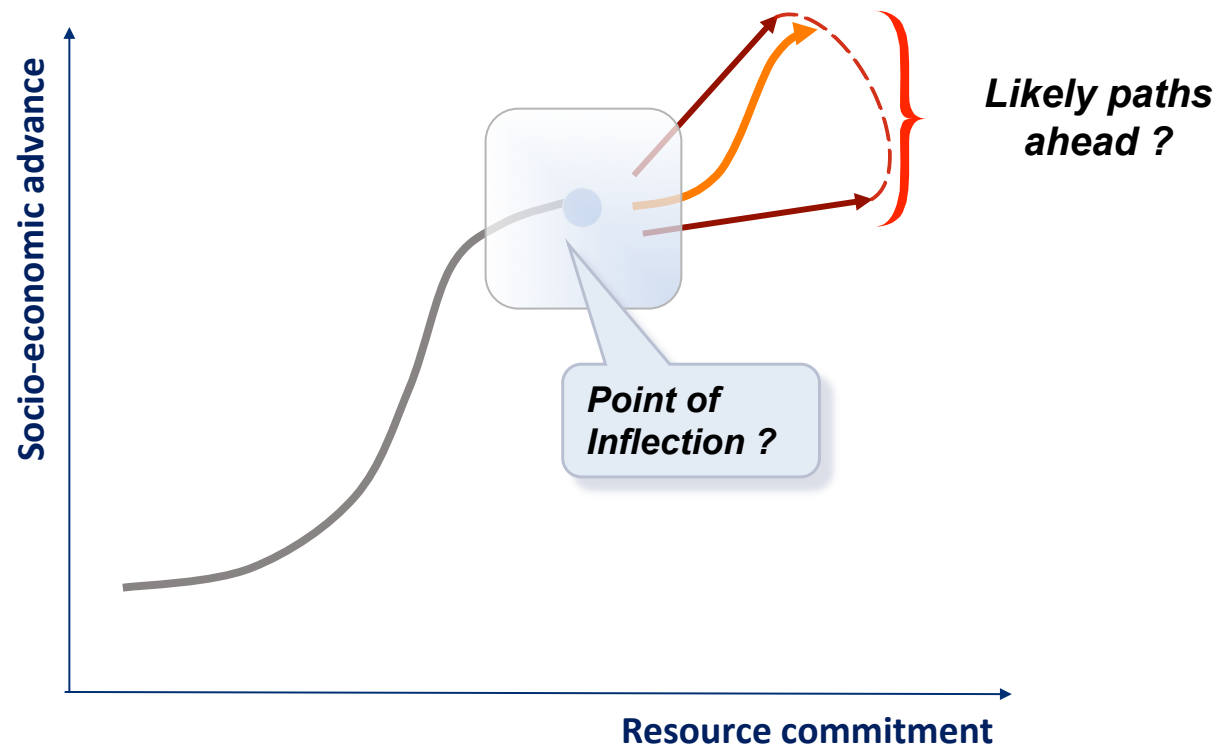
Partha S. Ghosh



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The basic thesis: Need a New Paradigm of Engagement ?





The illiterate of the 21st century will not be those who cannot read & write, but those who cannot learn, **unlearn**, and **re-learn**.

Alvin Toffler

Author of “Future Shock”



A few early thoughts.....

“The loosing organizations of the 21st century will not those who cannot *innovate & serve*, but those who cannot learn, unlearn, and re-learn”

Partha Ghosh

“Our ability to **challenge the present**, guides the possibility of securing advantage in the future”

Partha S Ghosh

Today three high level points....



1

Our Planet in Perspective
In the 21st Century?

2

Imagining Possibilities
ahead?

3

Next Phase *Imperatives*
Of Innovation?

Significant Shifts are in the making



1

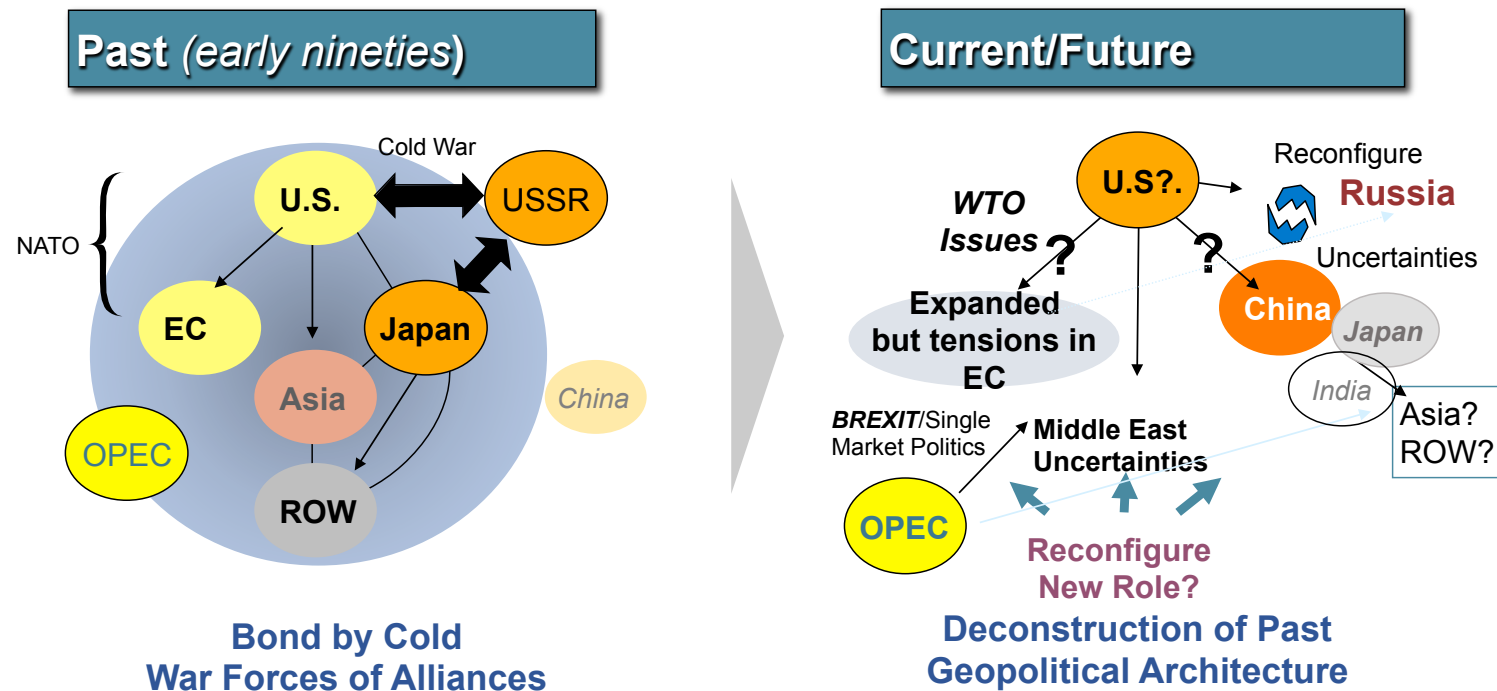
Our Planet in Perspective

AT MACRO LEVEL.....

- GEO-POLITICAL DISORDER
- SHIFT IN ECONOMIC CENTER OF GRAVITY
- UNCERTAIN PHASE OF GLOBALIZATION
- DIS-EQUILIBRIUM ? IN **3ES**
- CONFLICT OF "ISMS":

Geo-Political Alliances are in a state of transition since the early nineties

Paradigm Shift

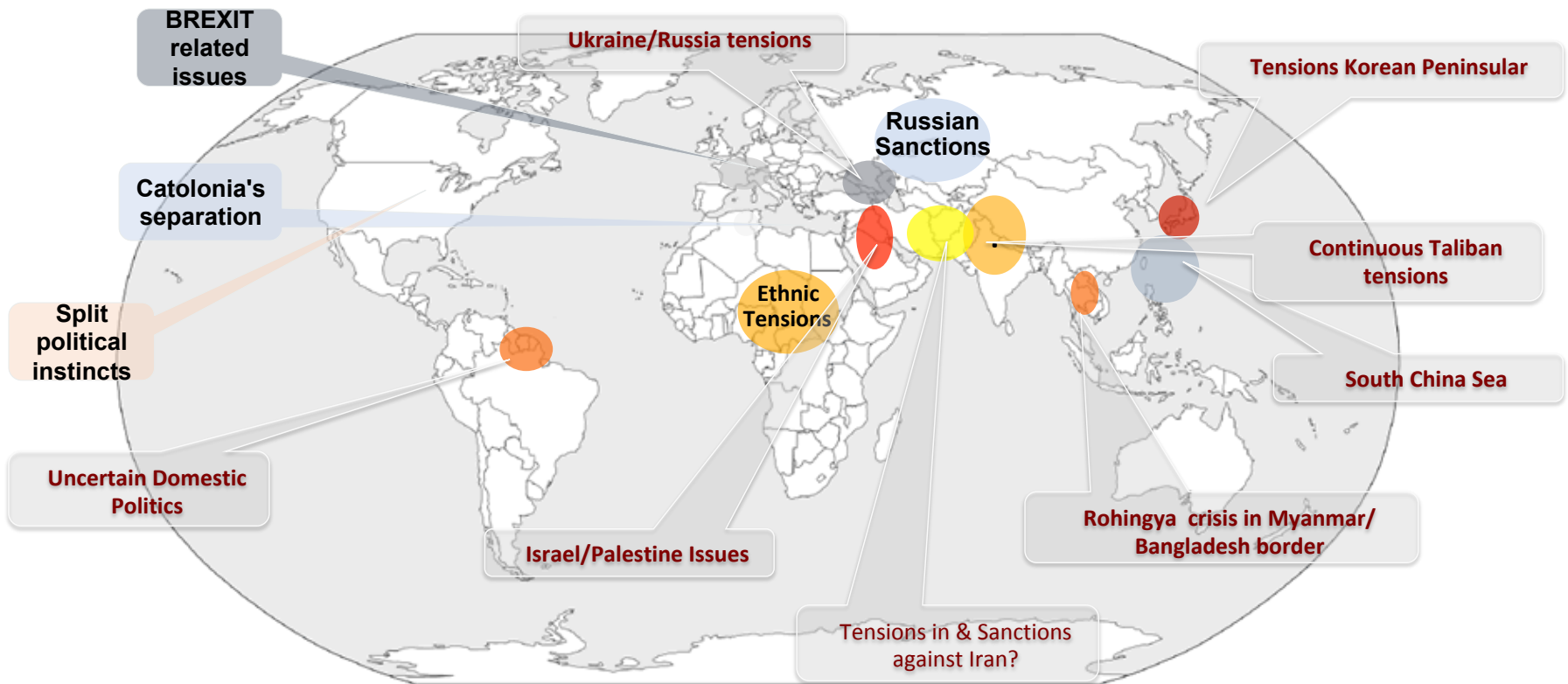


Geo-political tensions are serious and wide spread...



Map of the World Showing Major Countries

GEO-POLITICAL DISORDER

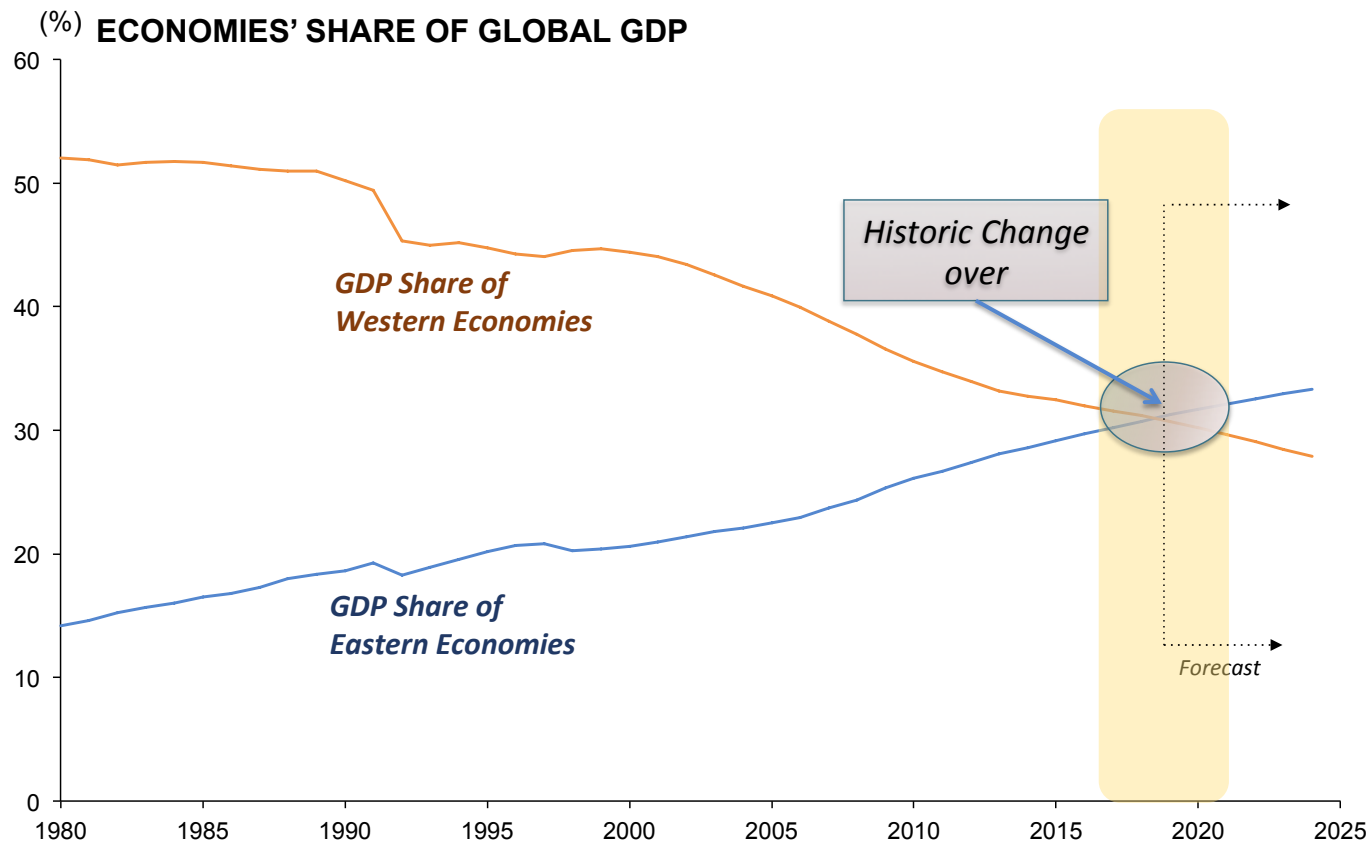


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Economic Power shift is obvious: strategic consequences could be significant



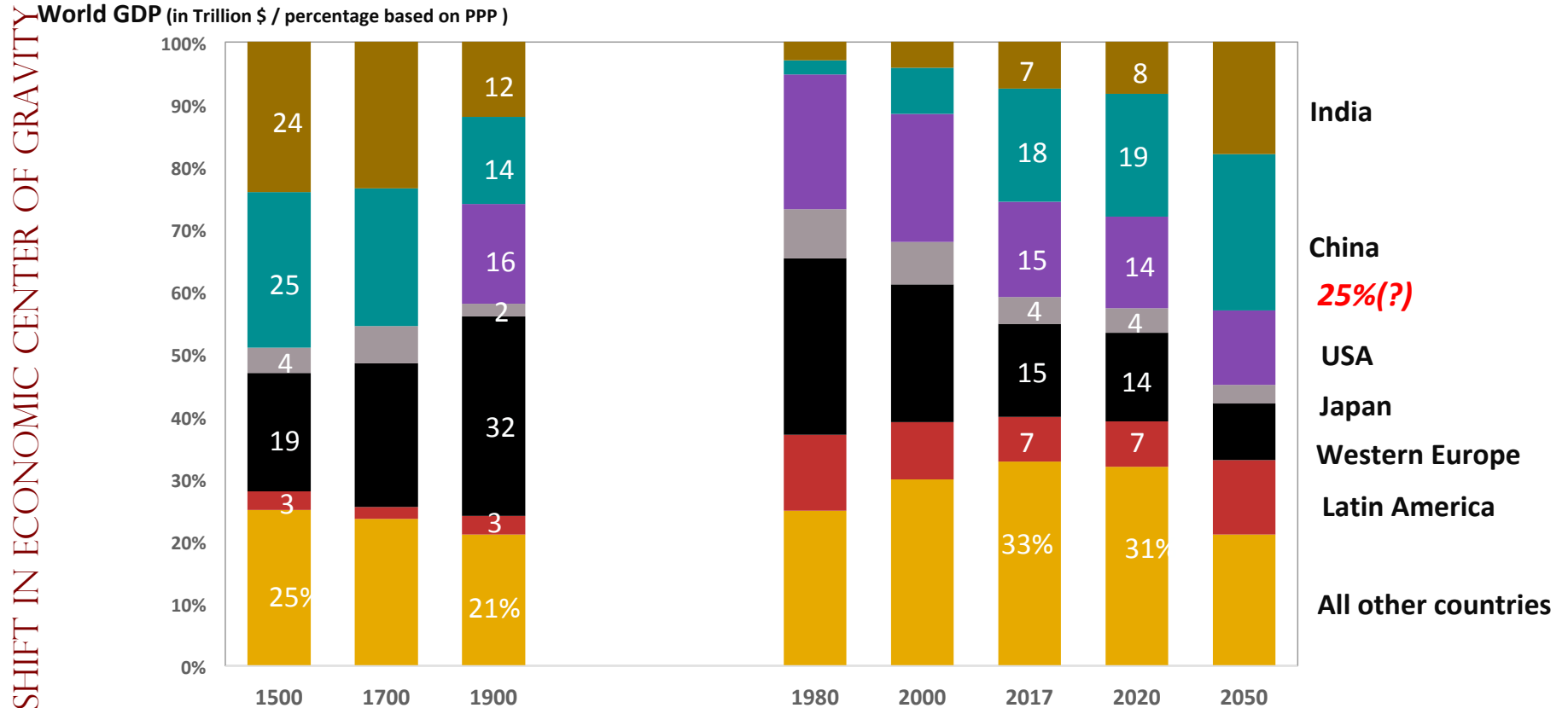
SHIFT IN ECONOMIC CENTER OF GRAVITY



,Source: IMF

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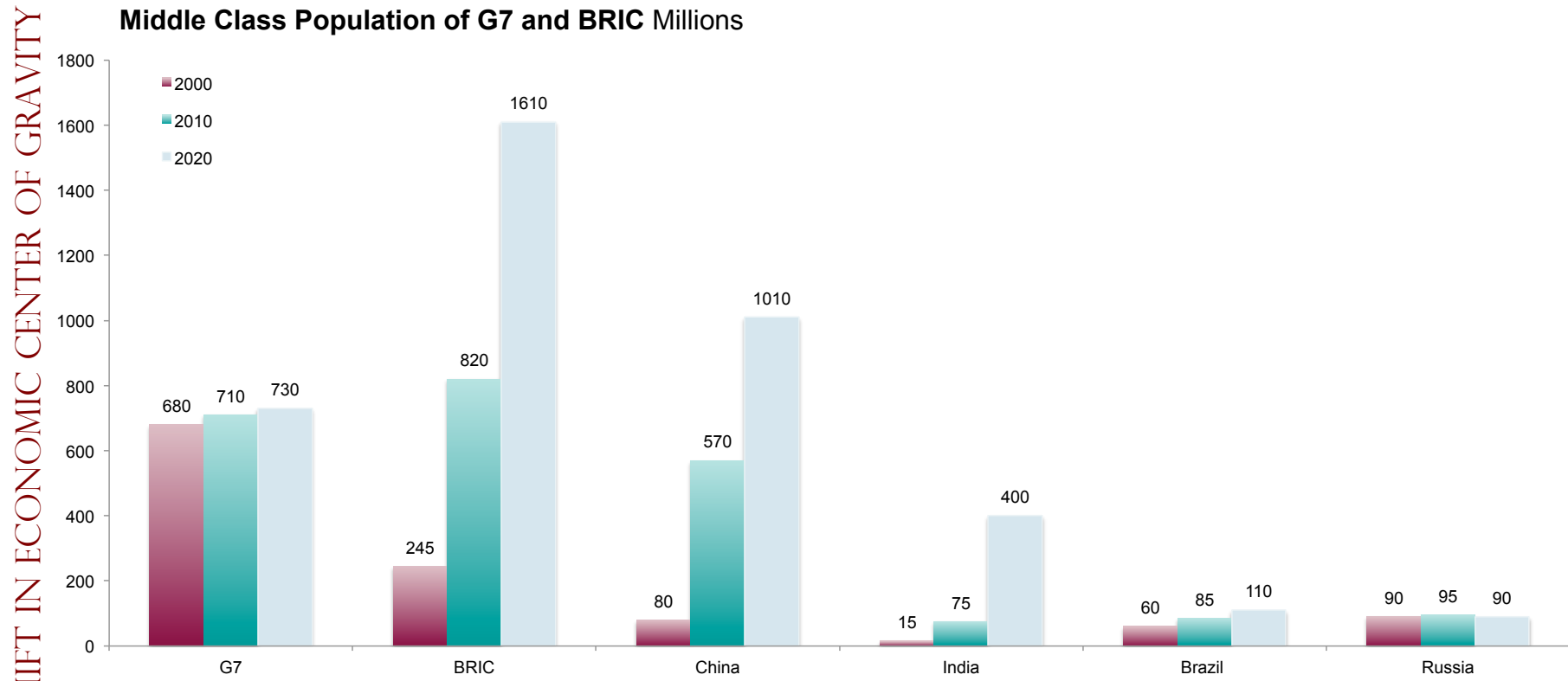
Particularly impressive is China, - on its way to gain its past glory?



Source: IMF/Maddison Historical Statistics/PWC analysis

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Rising middle class in China....



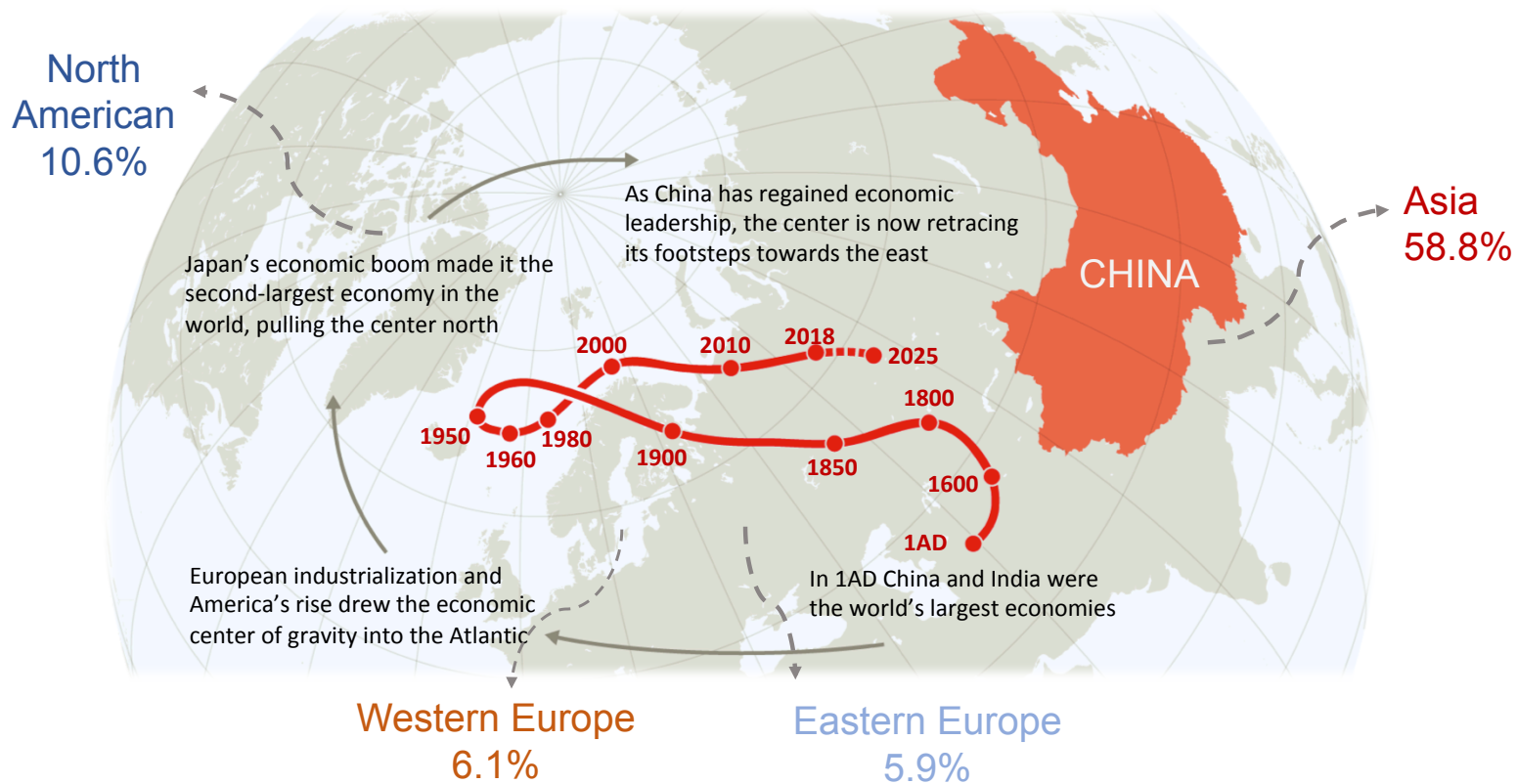
Source: World Bank and Goldman Sachs

*Middle Class: Annual income(current value) >\$6000, <\$30000

Shifting the economic center of gravity from the Atlantic to the Pacific area



The world's economic center of gravity*



Regional contribution to world in next 10 years (%)

, the Economists, BBVA

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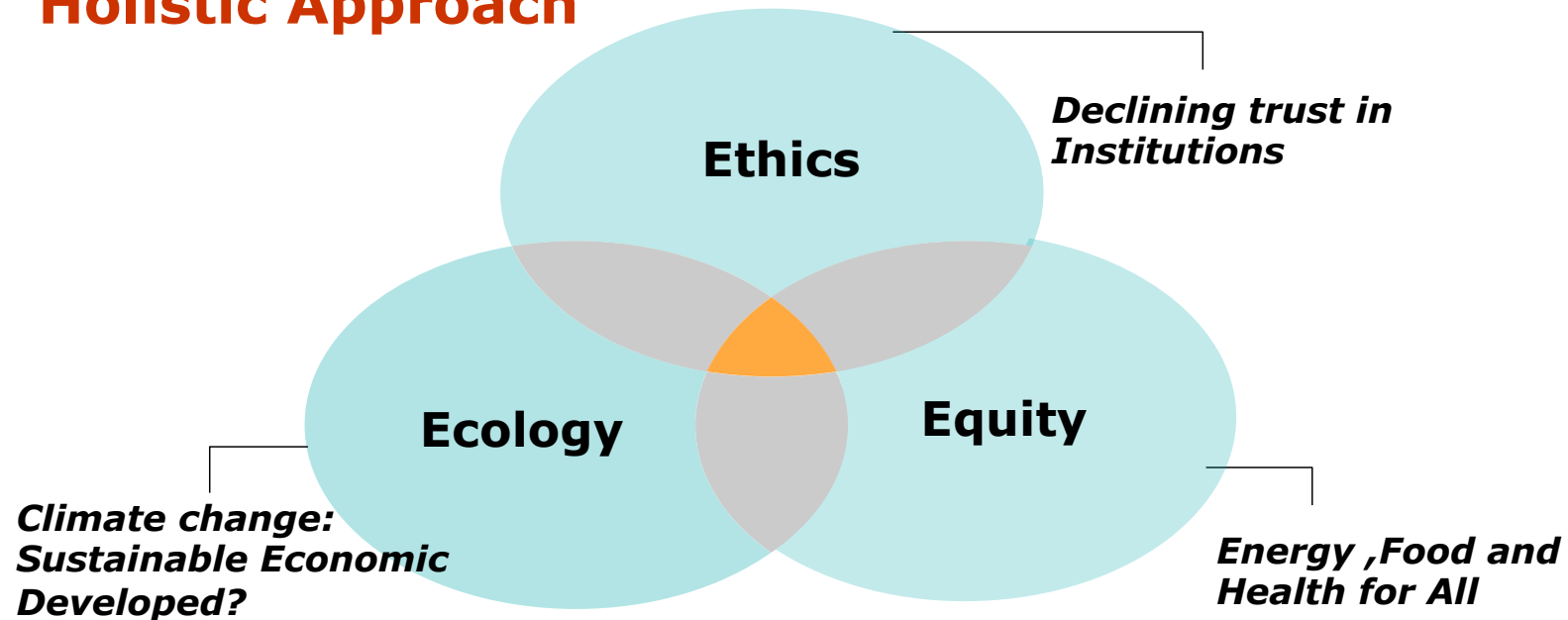
Decadence in 3Es



PROBLEMS ≈ OPPORTUNITIES

Holistic Approach

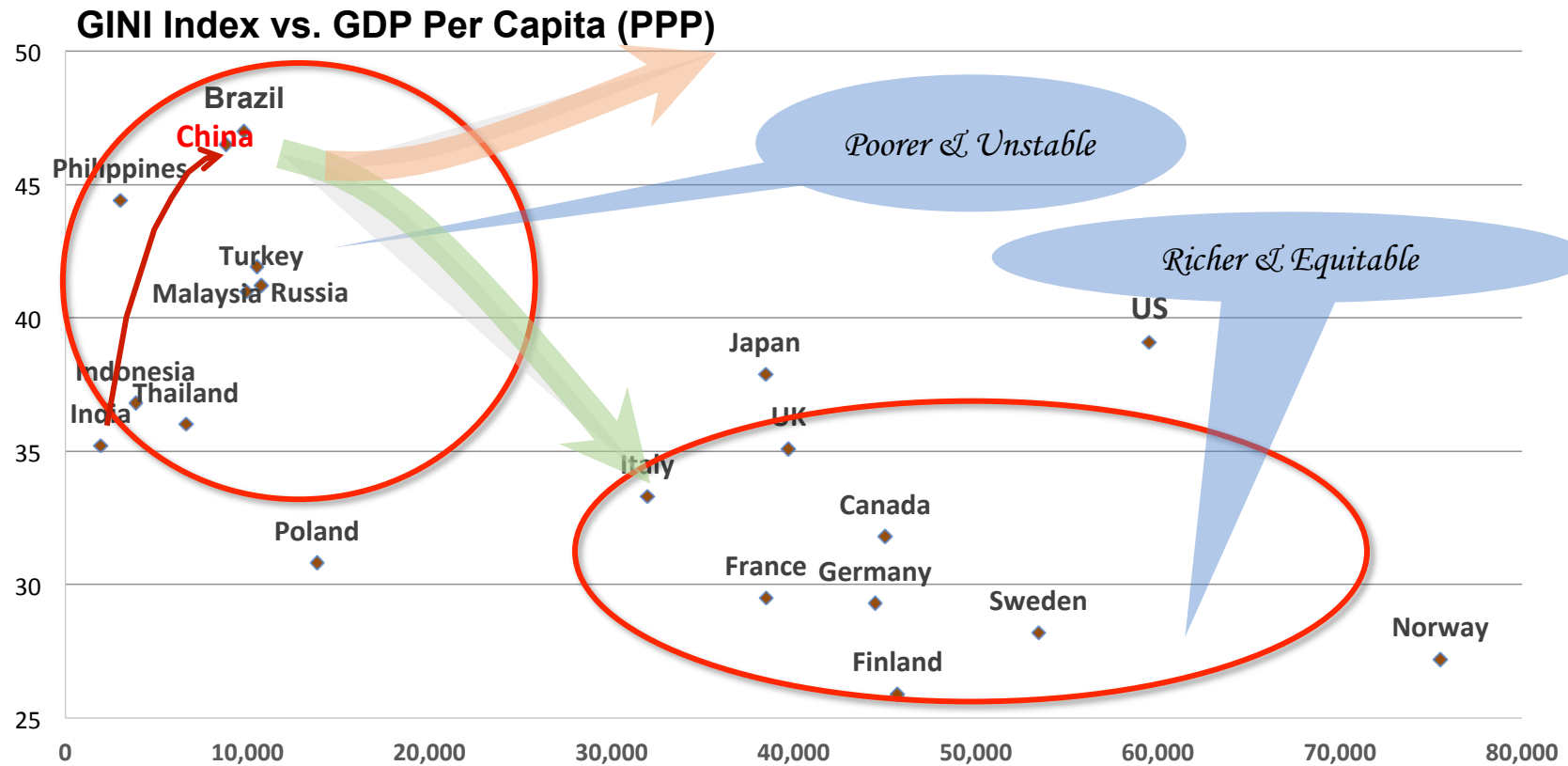
DIS-EQUILIBRIUM ? IN 3ES



Growth not at the cost of inequality ?



DIS-EQUILIBRIUM ? IN 3ES



SOURCE: World Bank/OECD/US Central Intelligence Agency

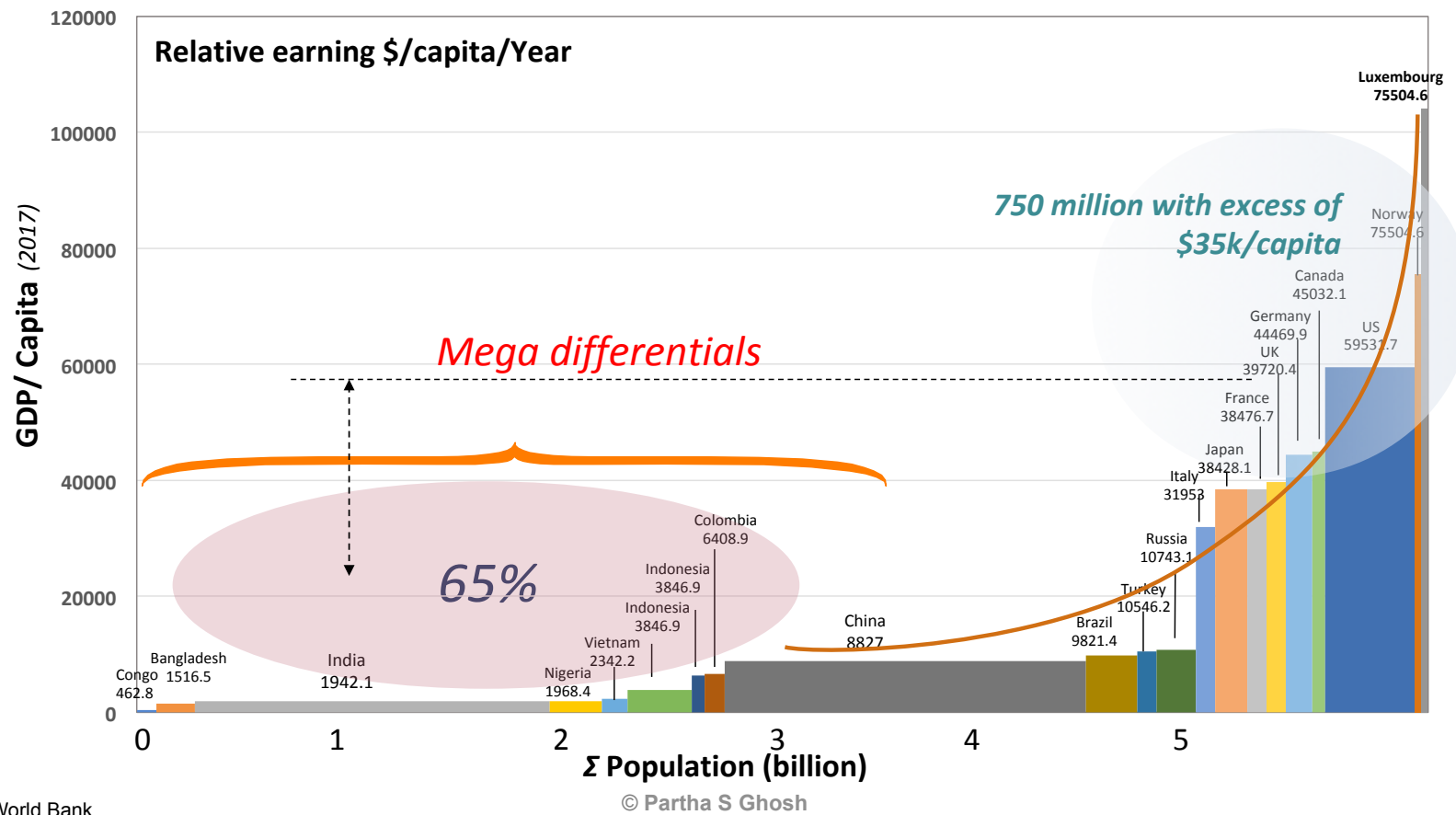
→ GINI index and PPP of China from 1990- 2010

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Critical Challenge: Mega differentials



DIS-EQUILIBRIUM ? IN 3ES



Data Source: World Bank

Slums are a globalized problem



Chief Features of a Slum

- Lack of durable housing
- Insufficient living area
- Lack of access to clean water
- Inadequate sanitation
- Insecure tenure

Generate large amounts
of untreated waste

*So what happens to the
waste?*

Slums are a globalized problem



Chief Features of a Slum

- Lack of durable housing
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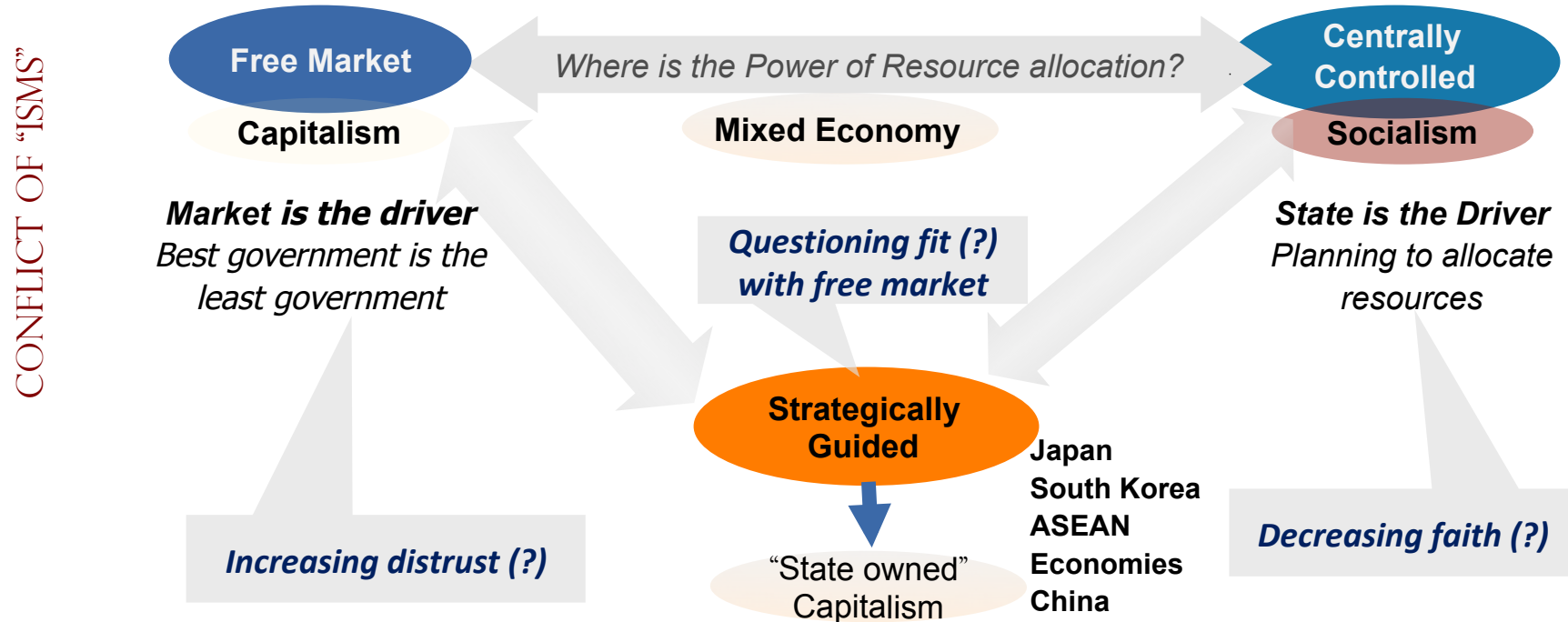
Generate large amounts
of untreated waste

So what happens to the waste?

Future of Resource Allocation Mechanisms: Need for Strategic Guidance



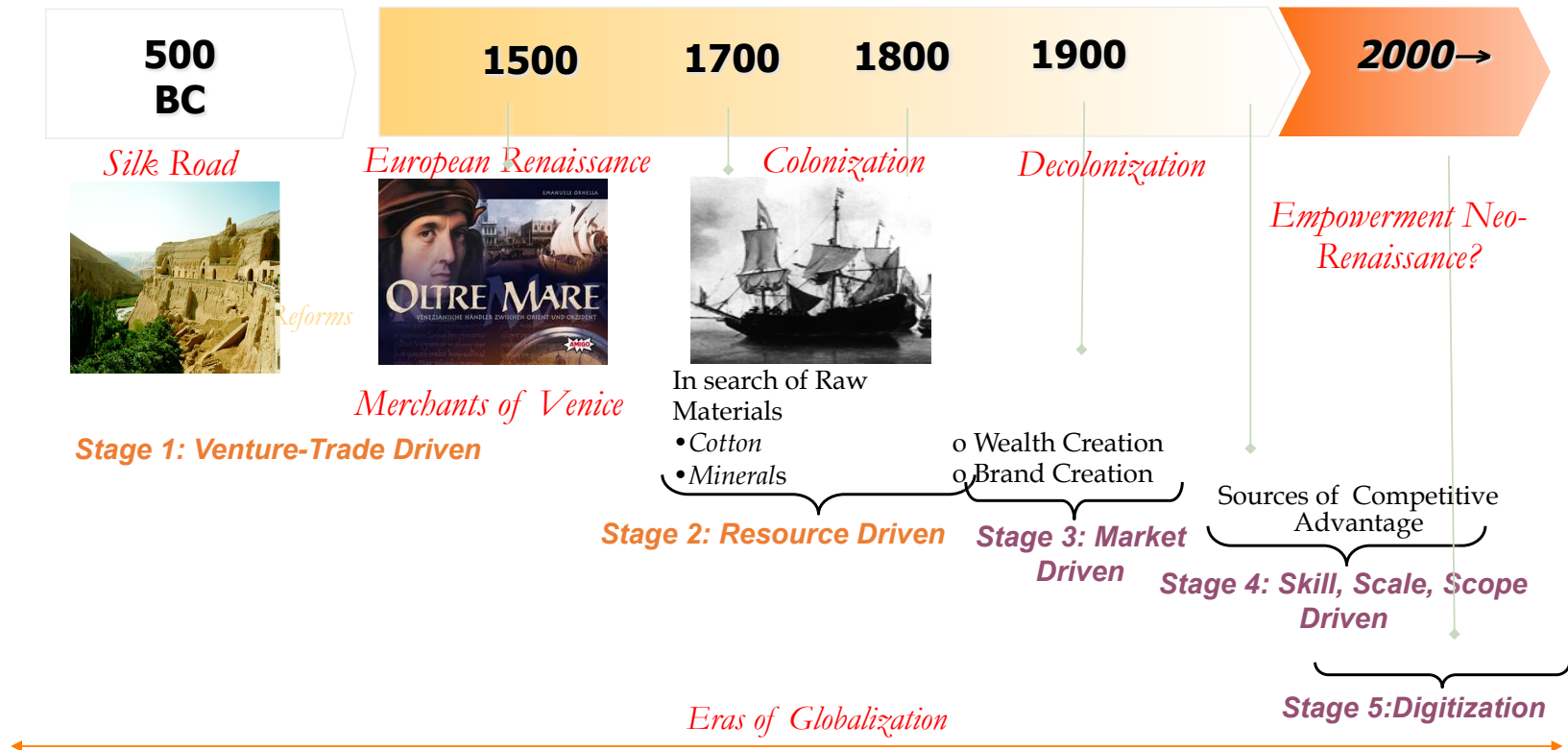
ECONOMIC PHILOSOPHIES AT WORK





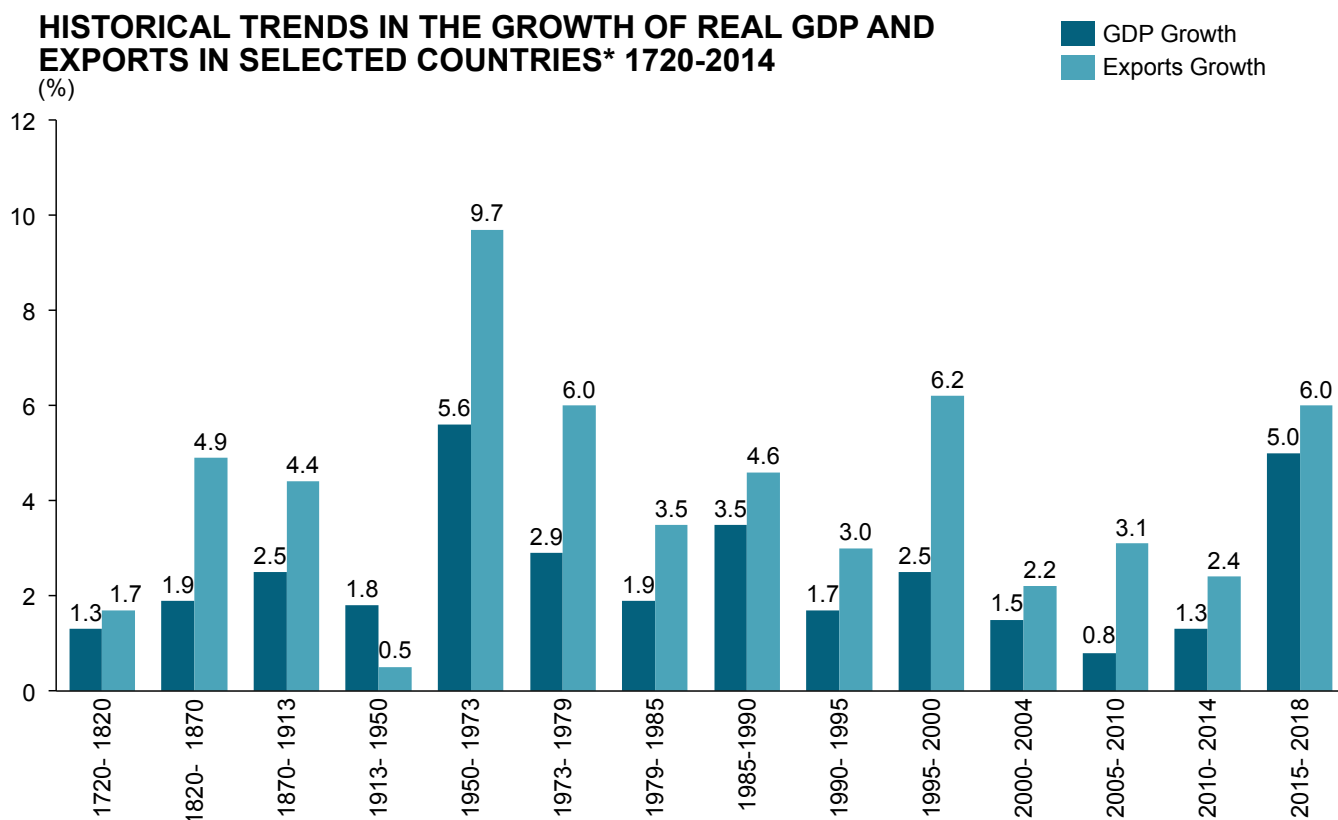
Globalization: 2500 Years in Perspective

Globalization is not new....



UNCERTAIN PHASE OF GLOBALIZATION

Over the past 300 years world has gotten increasingly connected



*Average growth rates for 6 major industrial countries: France, Germany, Italy, Japan, UK, and U.S. For the period 1985-1990 and 1990-1995, countries included are Japan, Germany and US. For the period 1995-2000, countries included are Japan, Germany, Italy, UK and US. For the period, 2000-2004, countries included are Japan, Germany, UK and US.

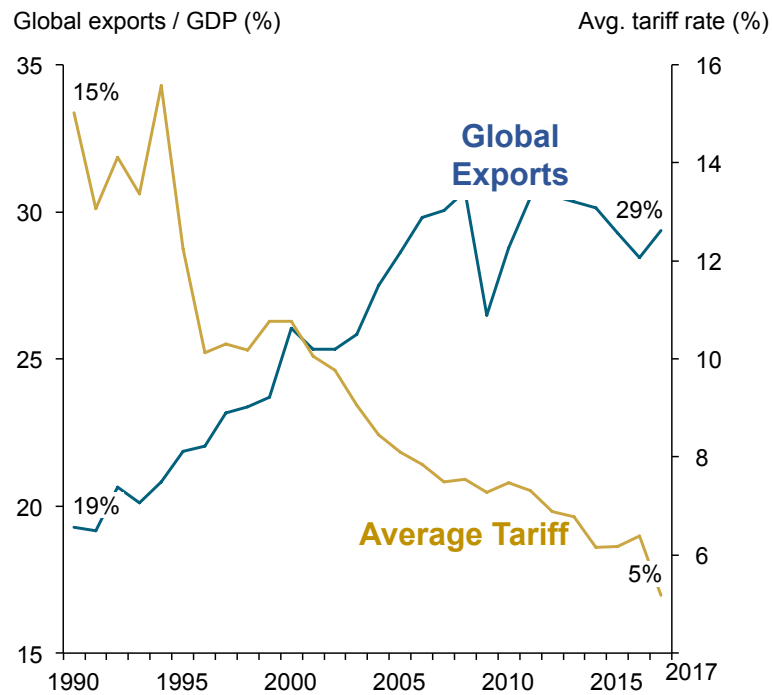
IMF World Economic Outlook Database

© Partha S Ghosh

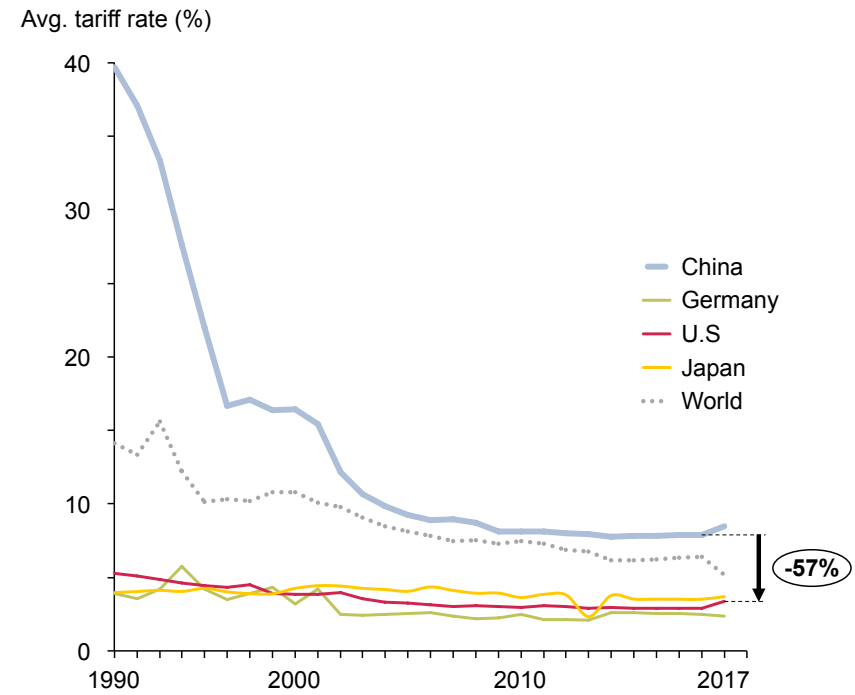
In the last thirty years as tariff has diminished, share of exports in Global GDP has increased



GLOBAL TARIFF AND EXPORTS TREND



AVERAGE TARIFF RATE TREND BY COUNTRY

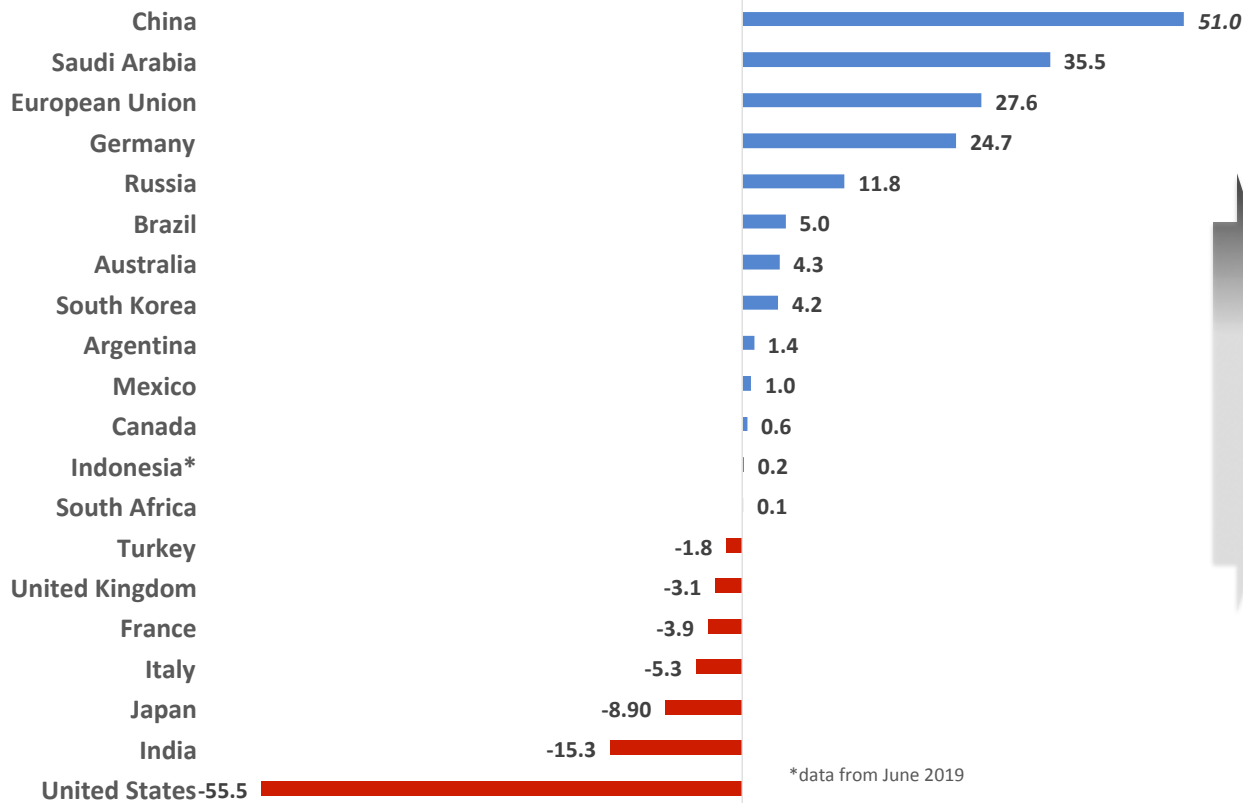


Gap in Balance of trade in the recent years has drawn significant political attention

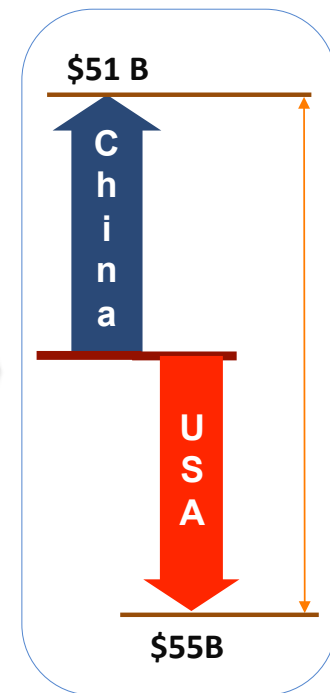


UNCERTAIN PHASE OF GLOBALIZATION

G20 Nations: Balance of Trade as of May 2019(US\$ Billion)



*data from June 2019



Source: <https://tradingeconomics.com/country-list/balance-of-trade>

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Globalization is not a “zero sum” game but “plus sum” process?



UNCERTAIN PHASE OF GLOBALIZATION

Unfortunate developments:

- ✓ Balance of Trade? US (-**VE**), China (+**VE**)
- ✓ Balance of Trust ? (**Protection of IP?**)

Long term issues:

- ✓ Widening Gap between Rich & Poor
- ✓ Limits of Free markets
- ✓ Resource constraints of Governments
- ✓ Climate & Ecology Constraints
- ✓ Eroding Ethics



*Promise of
Globalization derailed/
Constrained by Tariffs
& Quotas ?*



*Enlightened &
Responsible Global
Problem solving
towards a shared
purpose?*

At Macro-level our planet is indeed in the middle of multiple tensions along several dimensions(?)



Macro-level : Multi tensions

Mega Tornado in the making?



Today three high level points....



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Our Planet in Perspective
In the 21st Century?

Global order at point of inflection:
Not more and better of the same - Need
fundamentally New Rules of Engagement

2

Imagining Possibilities
ahead?

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Next Phase *Imperatives*
Of Innovation?



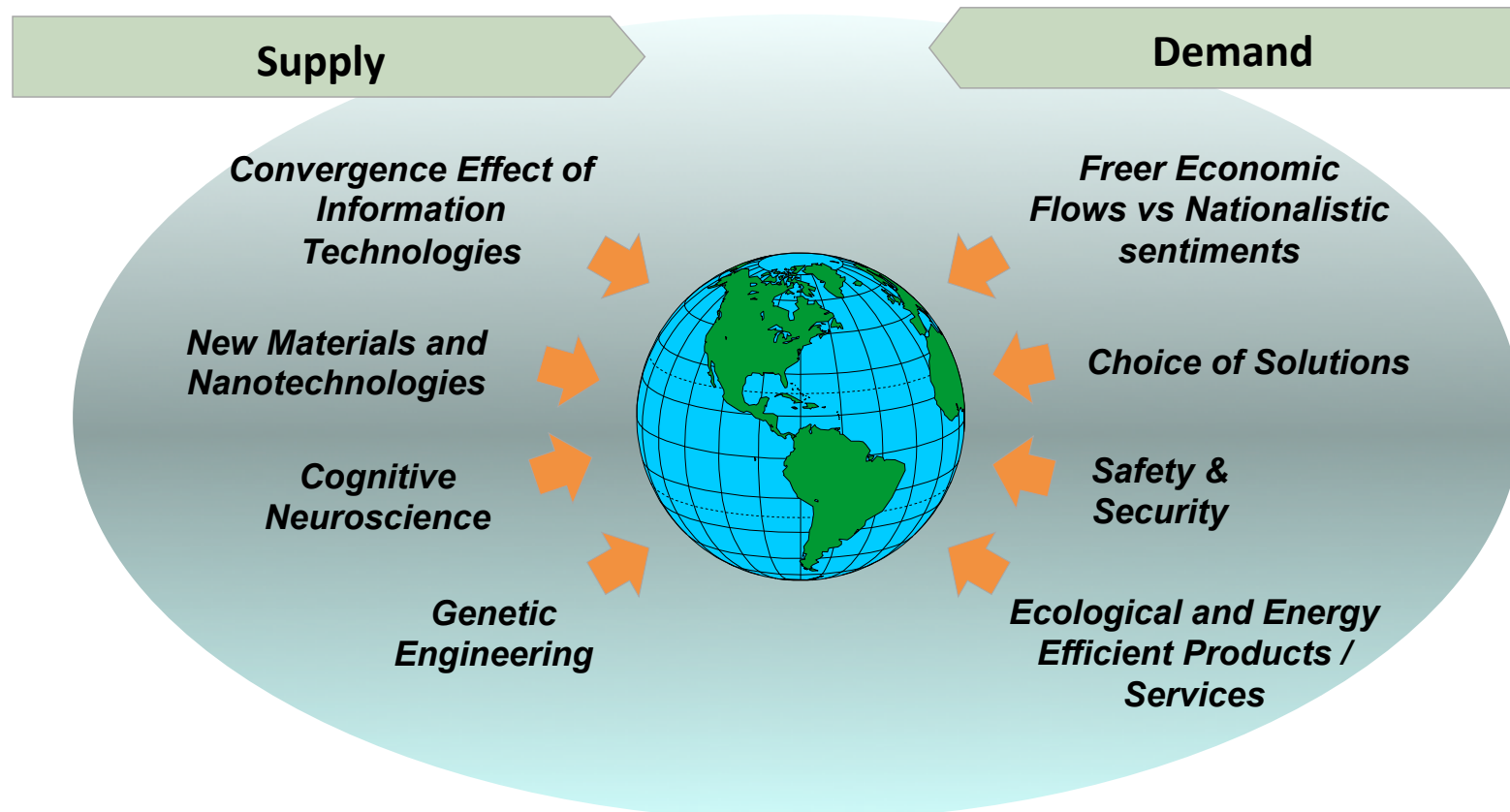
Significant Changes ahead

1 Our Planet in Perspective

AT MICRO LEVEL... 8 FORCES

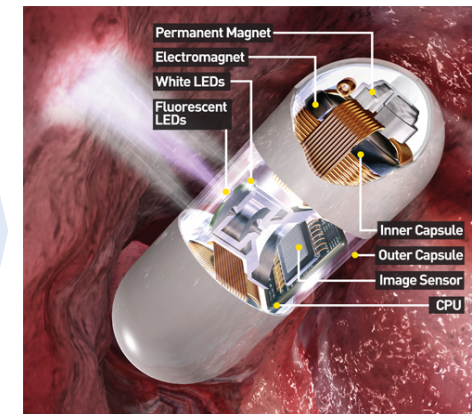
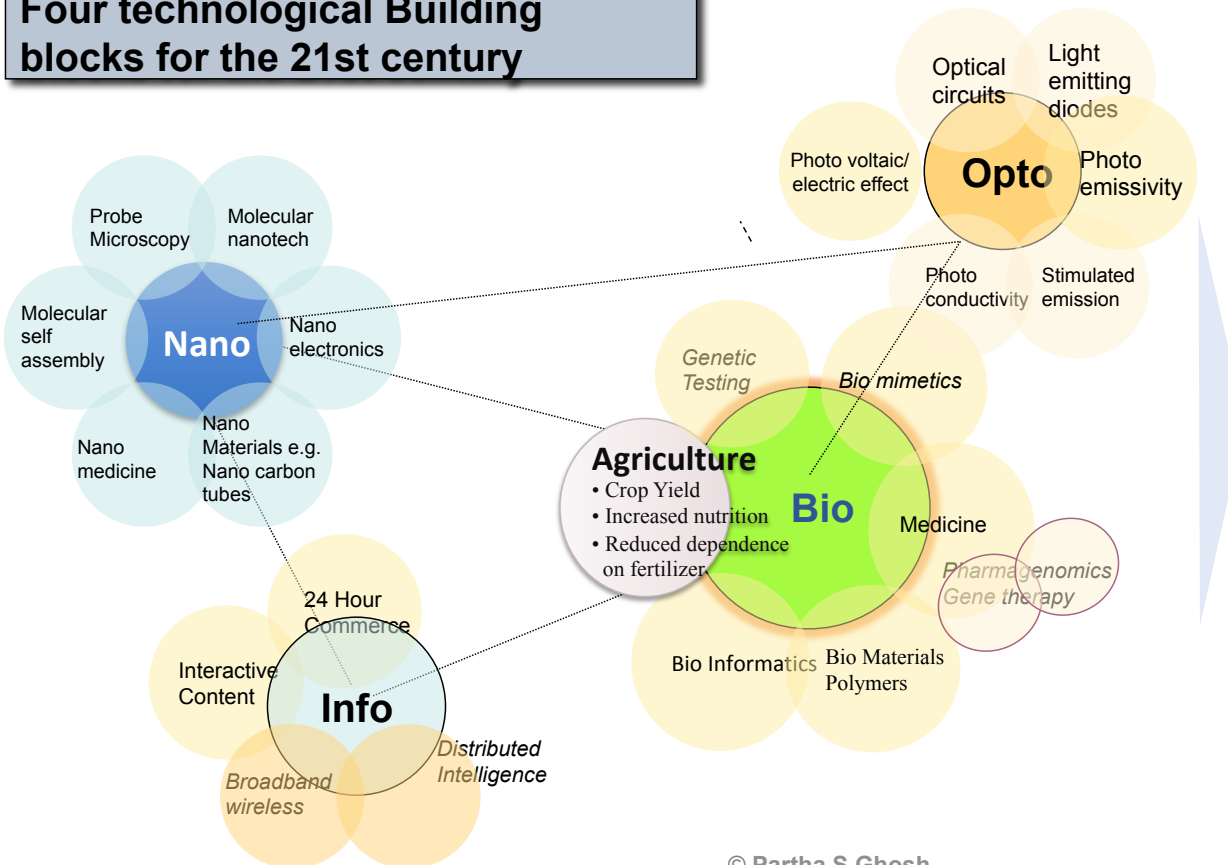
- CONVERGENCE OF TECHNOLOGIES/AI....
- NEW BUSINESS MODELS...
- NEW SPACES...

The Emerging Economic Environment — *The Big Picture*



Four technologies will influence how new Global solutions will develop

Four technological Building blocks for the 21st century

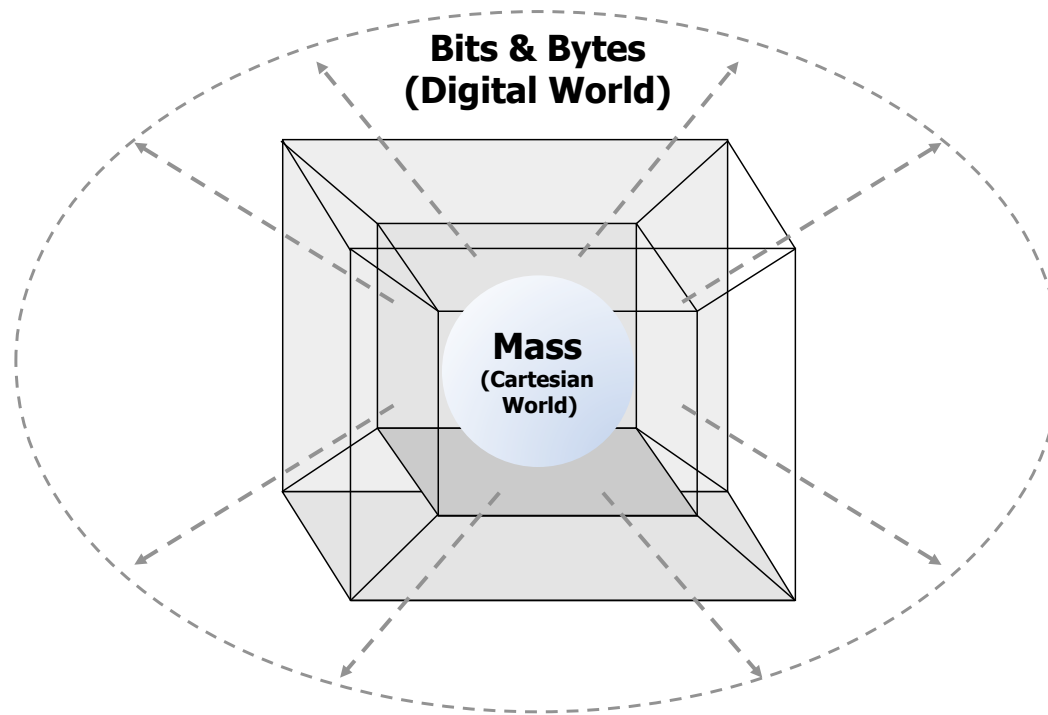


Takes **870,000 pictures** to construct a **360-degree images**

Vision of the New Breed of Value Propositions: Bit intensive services around Hardware



“Value Creation Through Integration of Bits and Bytes With Atoms and Molecules with a Global and Local Perspectives”



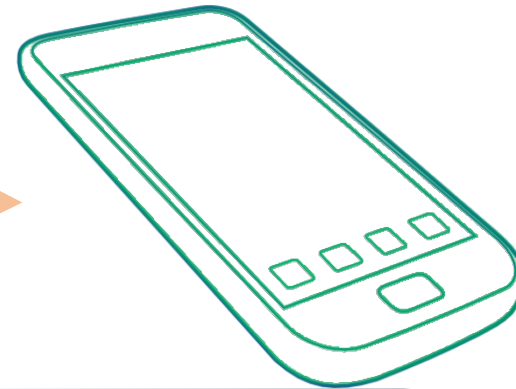


Auto and Electronics Industry have been merging

Automotive Industry



Consumer Electronics Industry



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© Partha S Ghosh

New Business models have rapidly emerged



Largest **retailer** without retail stores



U B E R

Largest **Taxi Company** without CARS



airbnb

The Power of AI @ Work

Largest in **hospitality** without real estate

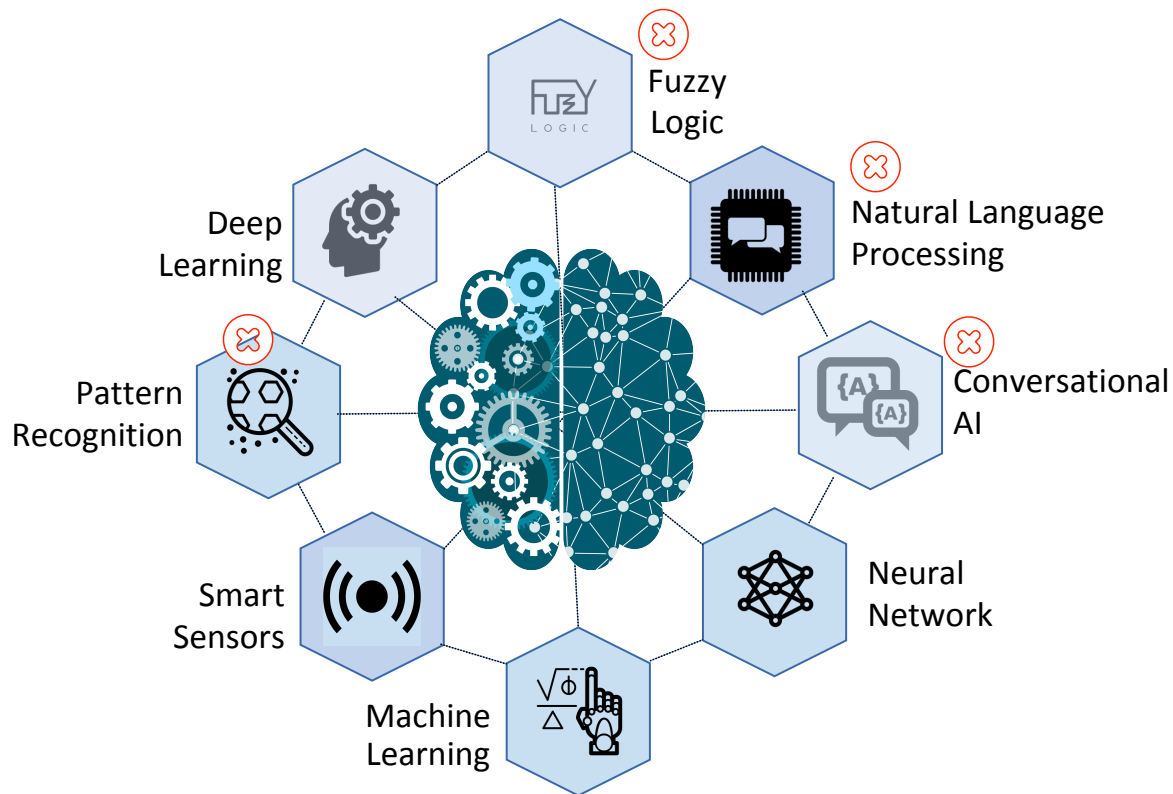


Largest in **social media** without content



Largest retailer and developer of SMEs

Indeed AI related technologies will open up new frontiers



Natural Intelligence Booster

- Empowering machines to do programmed thinking
- Facilitating communication across the nations to spread best practices

Multiplier of resources

- Improved use of properties of materials
- Facilitating circular economy

Accelerator of social services

- Health care, Education
- Facilitating reliable **Fintech/Use of Blockchain**

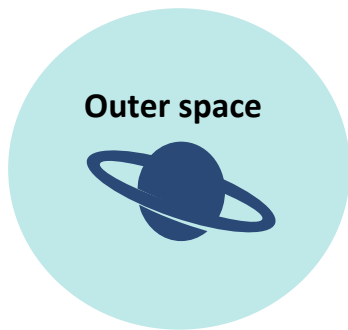
As we begin to engage with the new technologies **5** major domains will be emerging



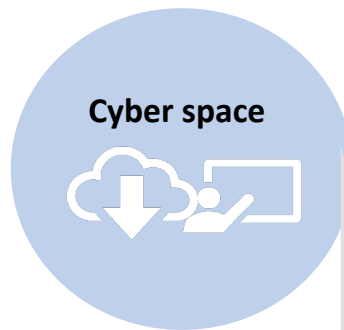


Four new spaces + One *transformed* Economic ecosystem

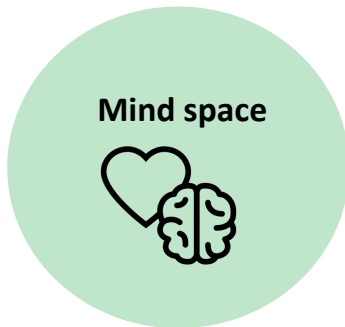
Four Fundamental Spaces



Outer space



Cyber space

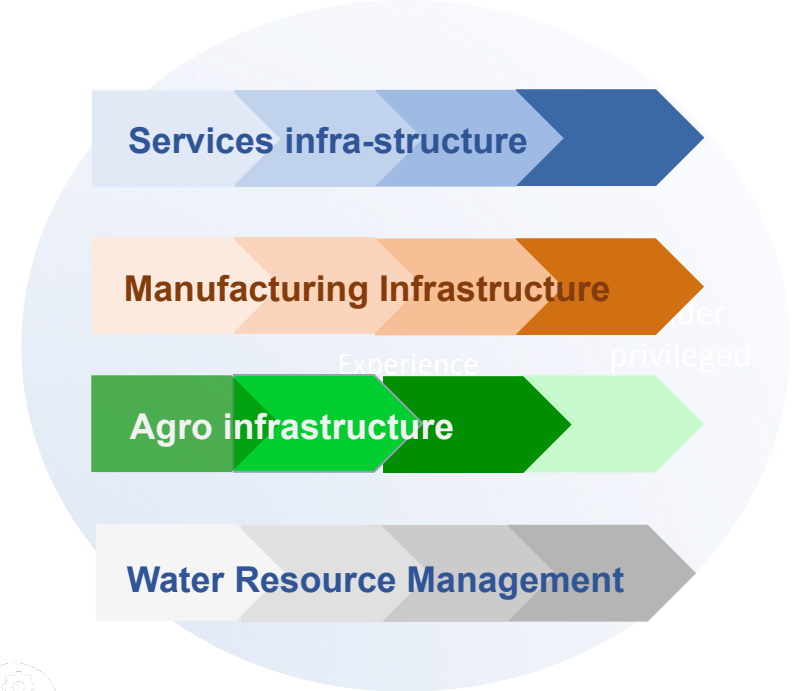


Mind space

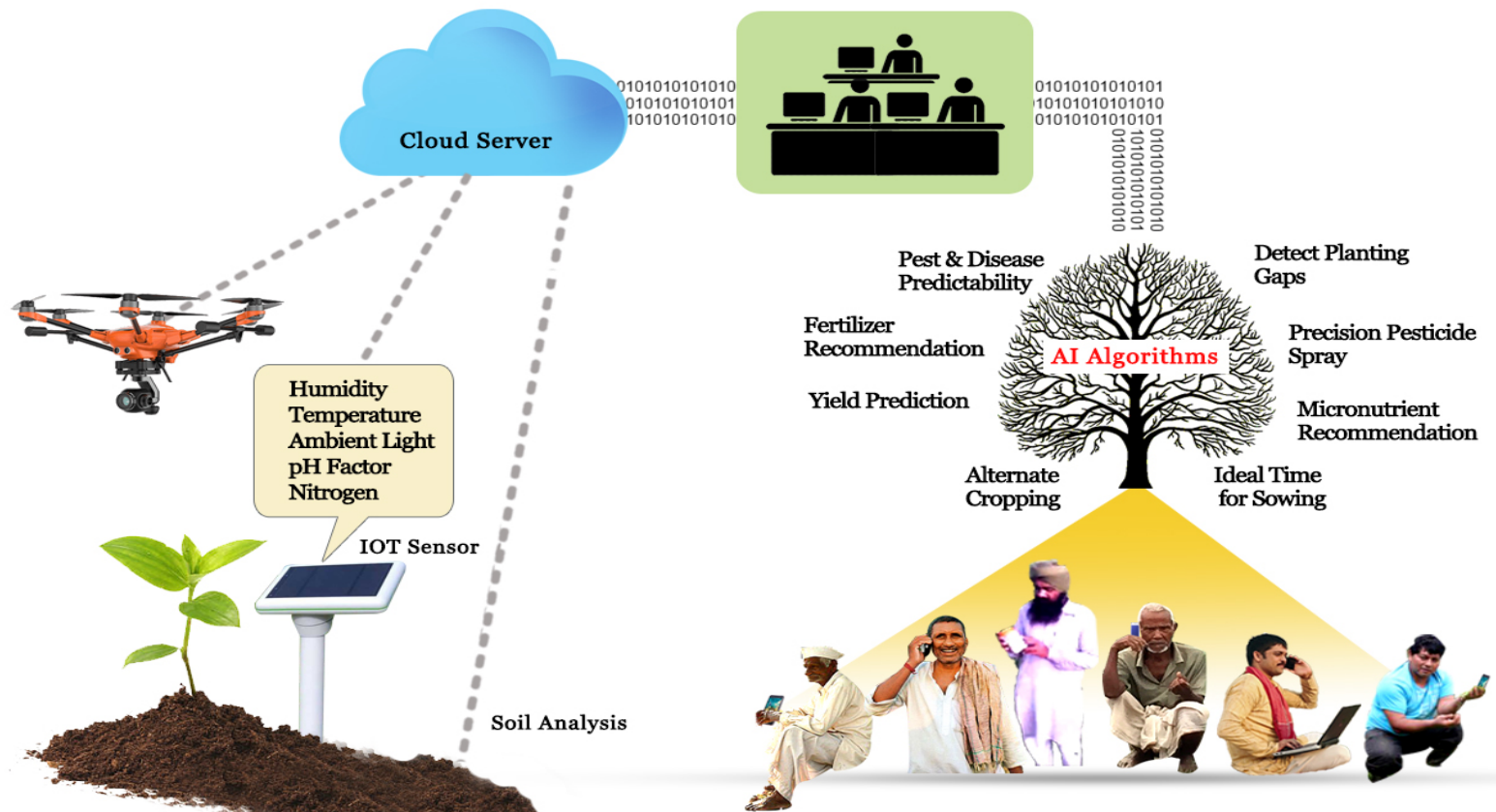


New Energy Space

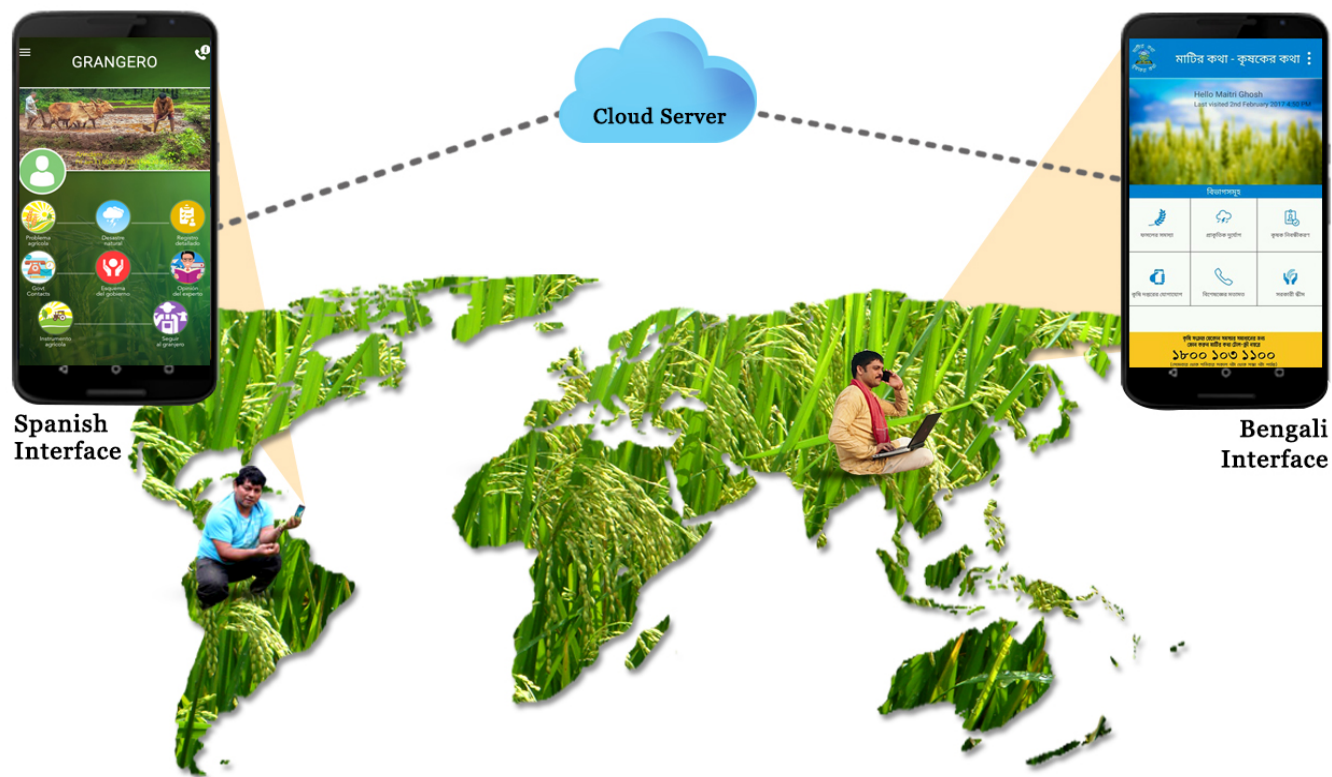
Plus transformed Economic System



For example productivity of agricultural sector could improve several folds



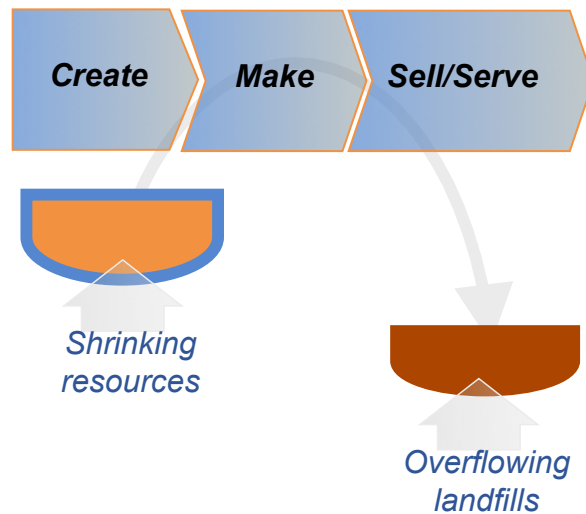
Enabling communication for the Global rural community



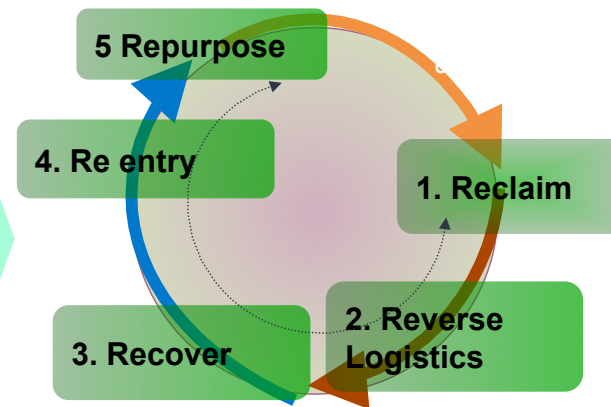
Towards Circular Economics= *Play of 5Rs*



Old paradigm: Linear Business Model



Possibly Paradigm: Circular Business Model



Development of reverse logistics process could open up new Industries



Creating An Industry (*Reverse Logistics*)

The Challenge of Creation of a New Industry:

1. Distributed to concentrated
2. Rules of engagement
3. Stewardship

Our Planet is indeed in the middle of multi level tensions along several dimensions(?)



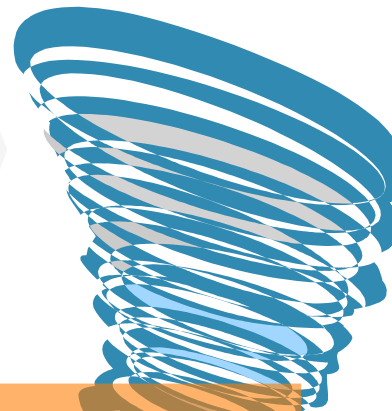
Multi-level : Multi dimensional tensions

Macro level

- ◆ Geo political disorder/Diffused threats
- ◆ Shifting Center of Gravity
- ◆ Dis-equilibrium in 3Es
- ◆ Conflict of “Ism”S
 - *Capitalism versus Socialism*
 - *Globalism versus Nationalism*
 - *Democracy versus Autocracy*



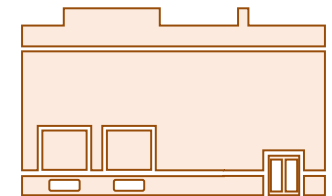
Mega Tornado in the making?



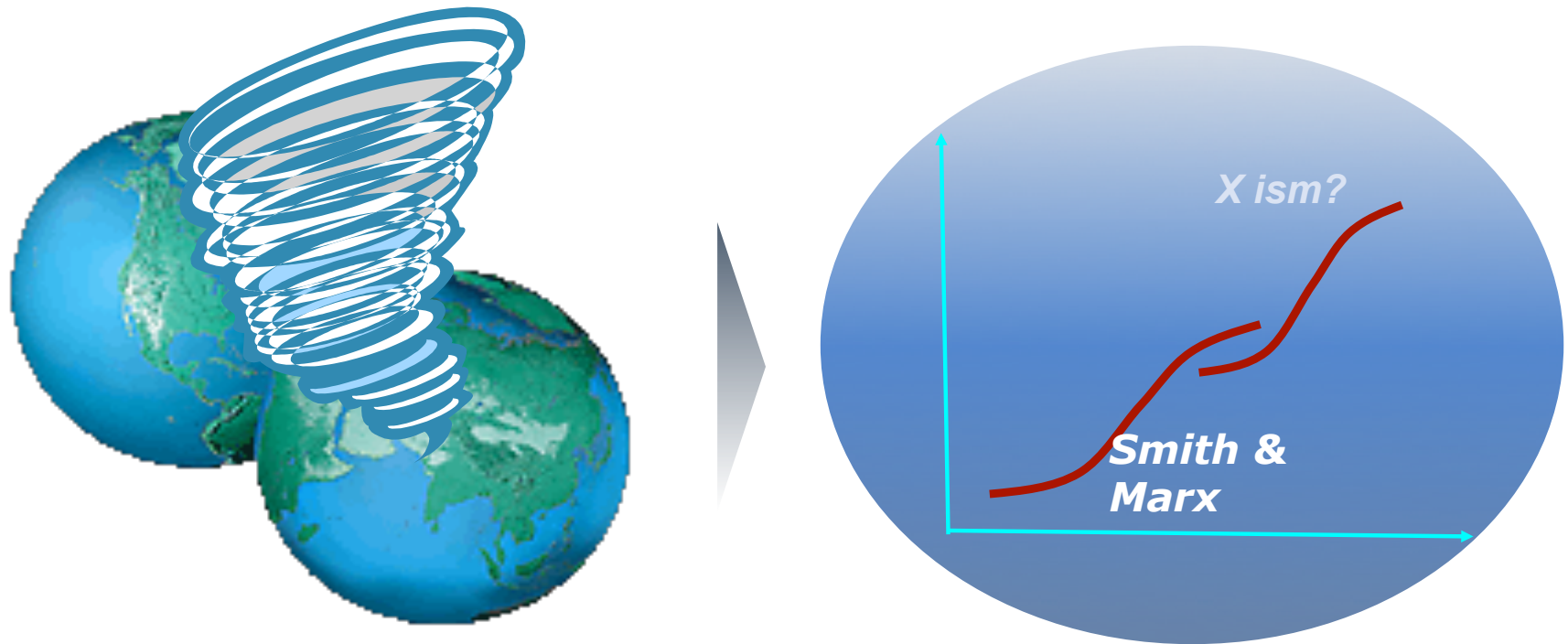
Increasing tensions

Micro level

- ◆ **Convergence of technologies**
 - *Rise of AI/VR versus NI*
 - *Physical versus Knowledge assets*
- ◆ **New business models** —Asset to Energy and waste management



Turbulent times: In search of more Efficient Resource Allocation Mechanisms



Today three high level points....



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In the 21st Century?

Global order at point of inflection:
Not more and better of the same - Need
fundamentally New Rules of Engagement

2

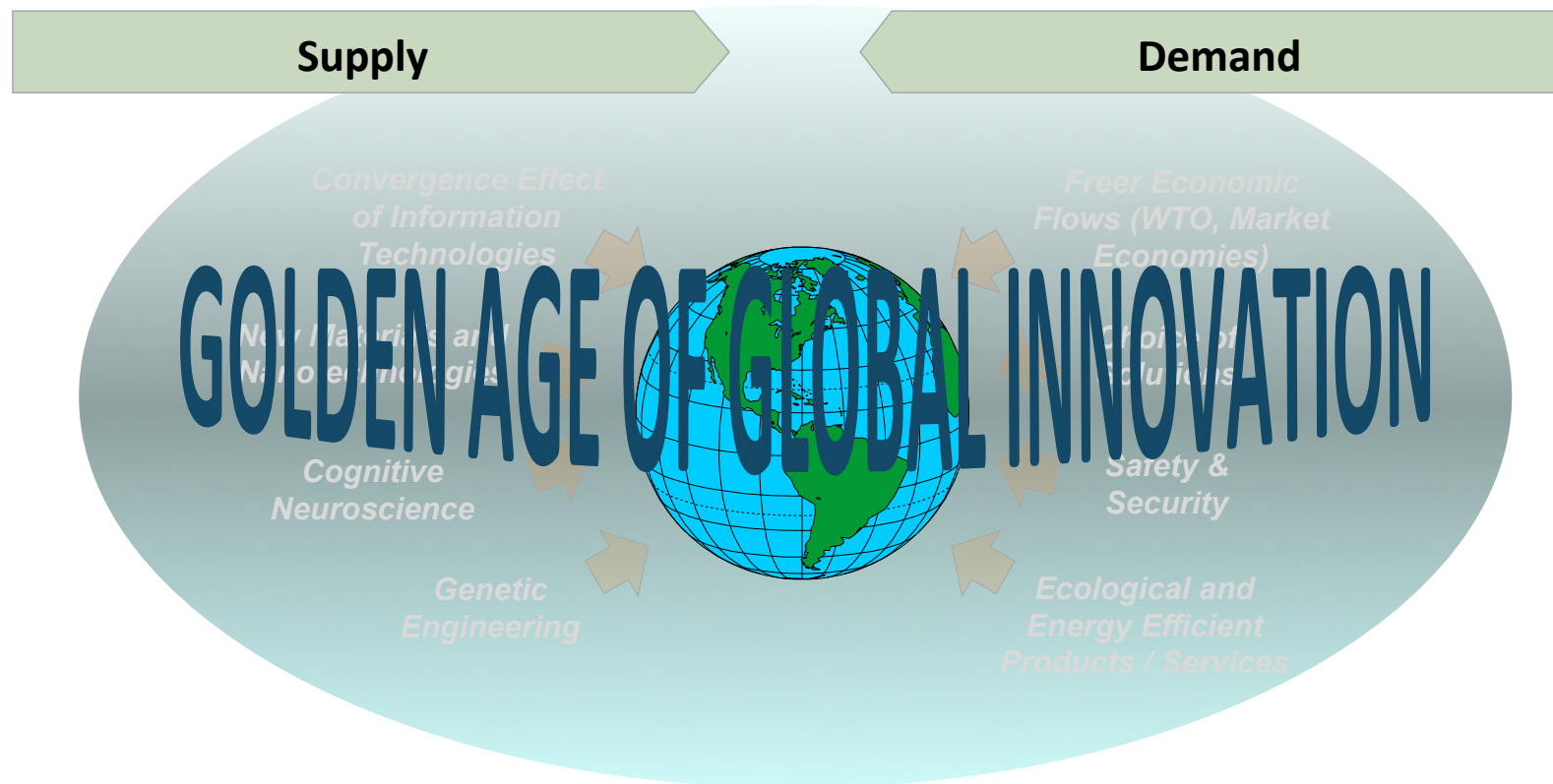
Imagining Possibilities
ahead?

Significant Possibilities ahead:
Uneasy Challenges - Need a “plus sum”
mind-set to connect unobvious dots

3

Next Phase *Imperatives*
Of Innovation?

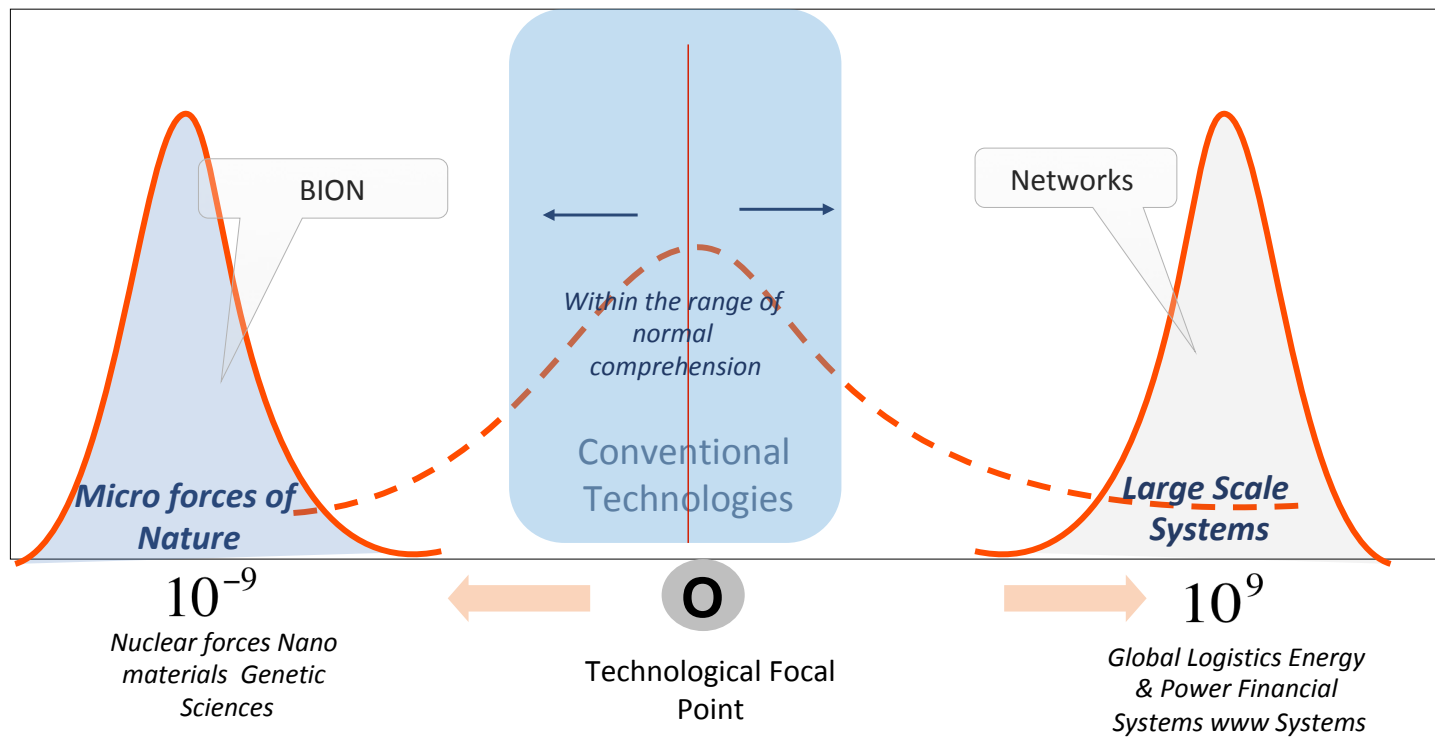
The Emerging Economic Environment — The Big Picture



Shape of things to come...



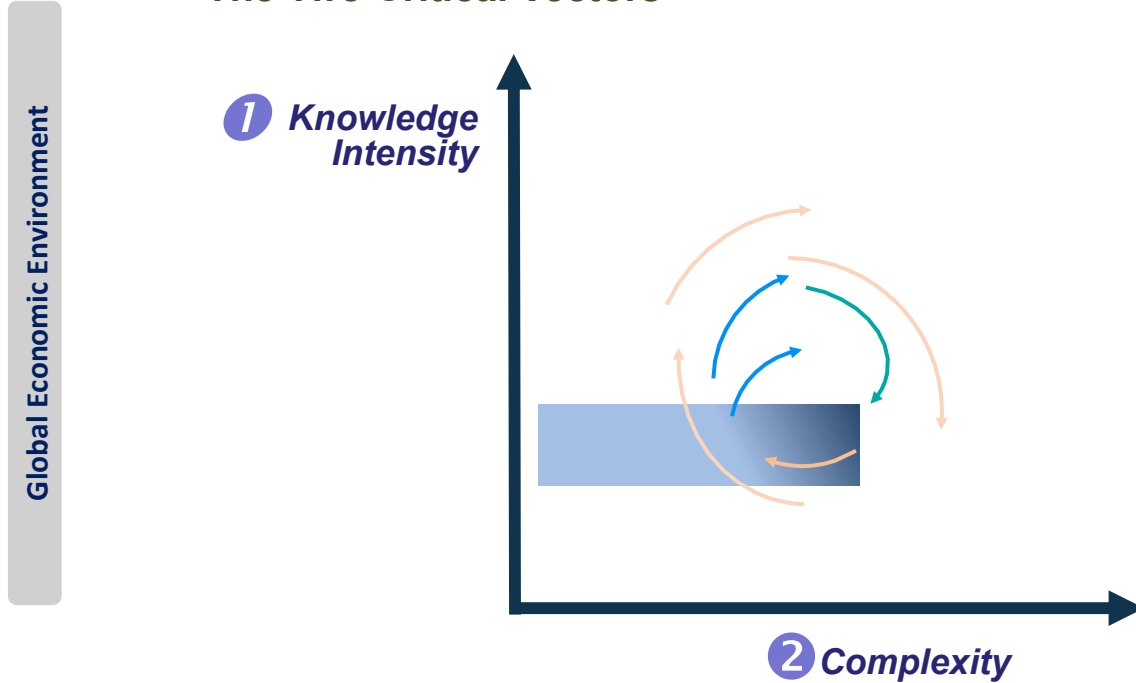
Influence of Technologies on Society





So the Emerging Landscape

The Two Critical Vectors



Source: Partha S Ghosh Innovation Framework

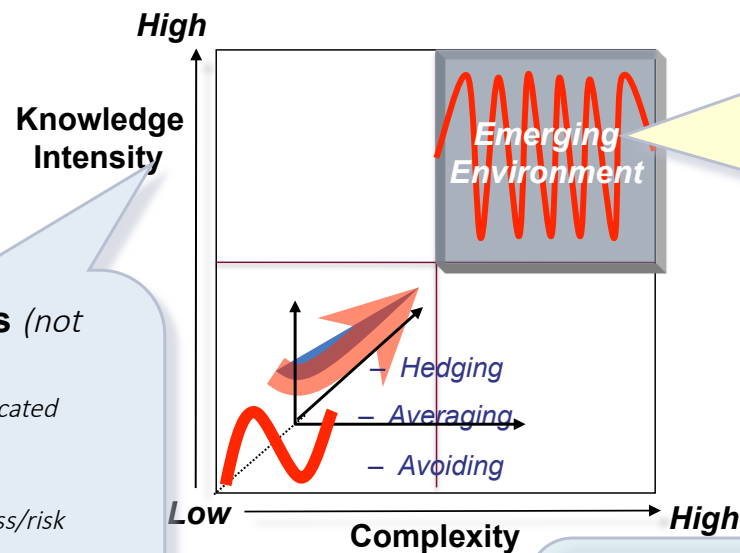
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Challenge: Old tools, old mindsets, old habits for the New Environment are indeed inadequate



Global Economic landscape: The Basic framework

Global Economic Environment



Specific factors (not comprehensive):

- Increasingly sophisticated technologies
- Shortening life cycles
- Innovation of business/risk management models

There is a clear need for New Leadership Framework that enables:

- **Imaginative capacity** – scale at start
- **Non Linear** versus linear thinking
- **Holistic & timely responses** to sudden events
- **High resolution problem solving capacity** with global perspective
- **Insightful real-time decision making** to make big bets

Specific factors (not comprehensive):

- Geo politics & Geo economics/Trade rules
- Regulatory requirements- environmental, safety and sovereign policies
- Supply chain contracts and networks
- Public expectations(Community to national levels)

Source: Partha S Ghosh Innovation Framework

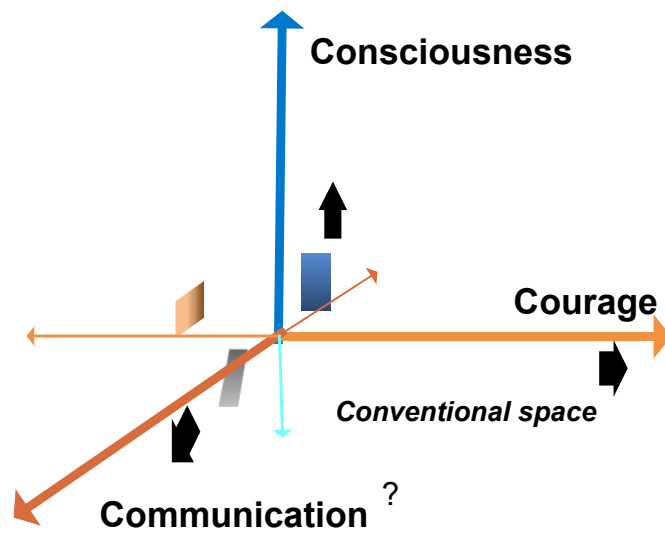
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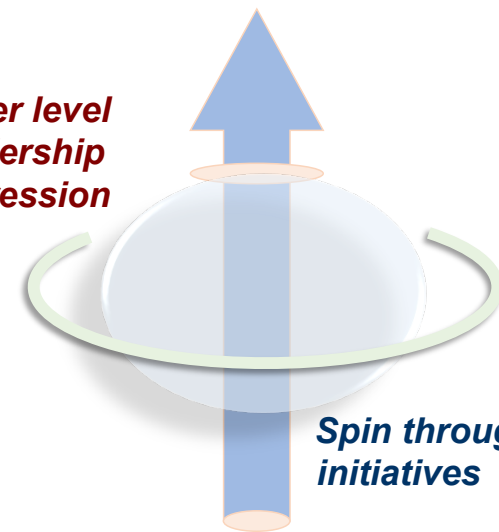
Three fundamental vectors to cultivate Innovation Culture

Expanding Strategic Space

Partha Ghosh model



*Higher level
Leadership
Expression*



Source: Partha S Ghosh Innovation Framework

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There by Improve Associational Thinking

Idea sharing platform

Drives connections to ideas

Provides networking opportunities

**= CREATIVITY
&
INNOVATION**



**a space
for ideas**

Source: Johnson & Johnson

.... To enable Interoperability & Uncommon connections





Fundamentals efforts are required... largely because of our brains have been hard-wired to make certain kinds of errors...

Biases

Implicit
cognition

Cognitive shortcuts

Susceptibilities

Unconscious inference

Automated responses

Irrationalities

Blind
spots

Sensory Misperceptions

Psychological
traps

ETHICAL FADING

Systemic
cognitive
errors

Mind bugs

Prejudices

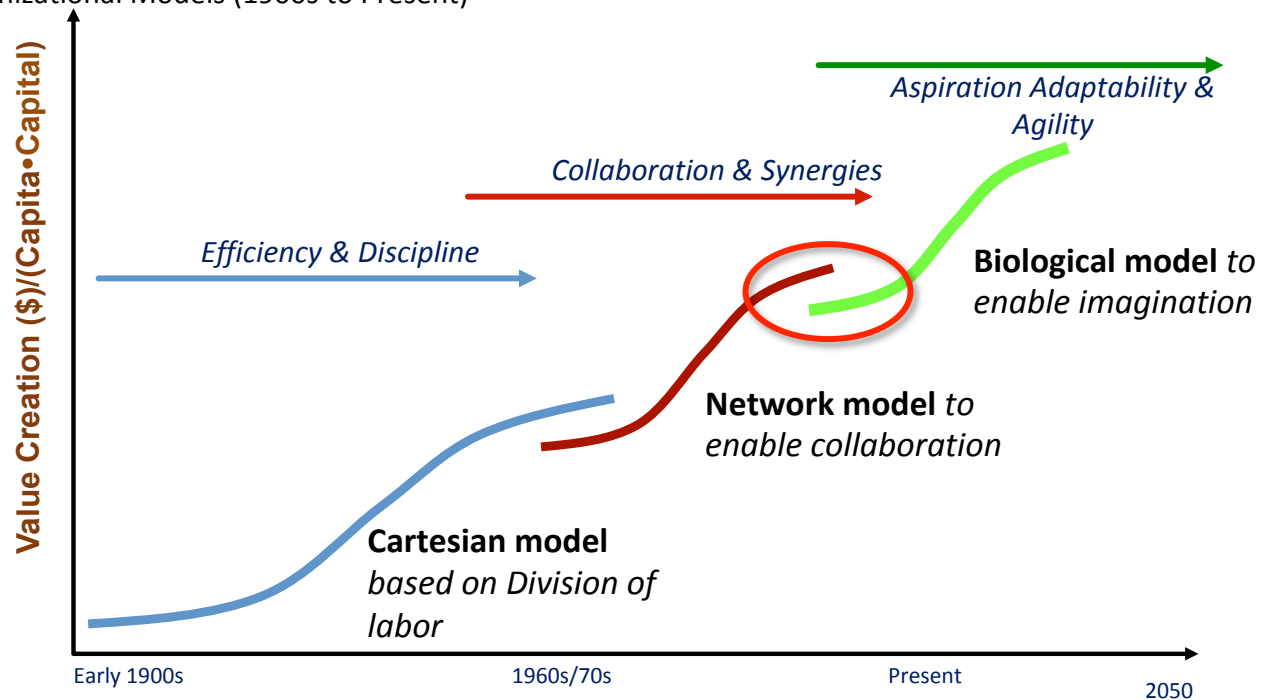
Unconscious
thinking

In summary, we are indeed at the cusp of renewing the Art & Science of how forward looking organizations must work in the future



ORGANIZATIONAL EFFECTIVENESS

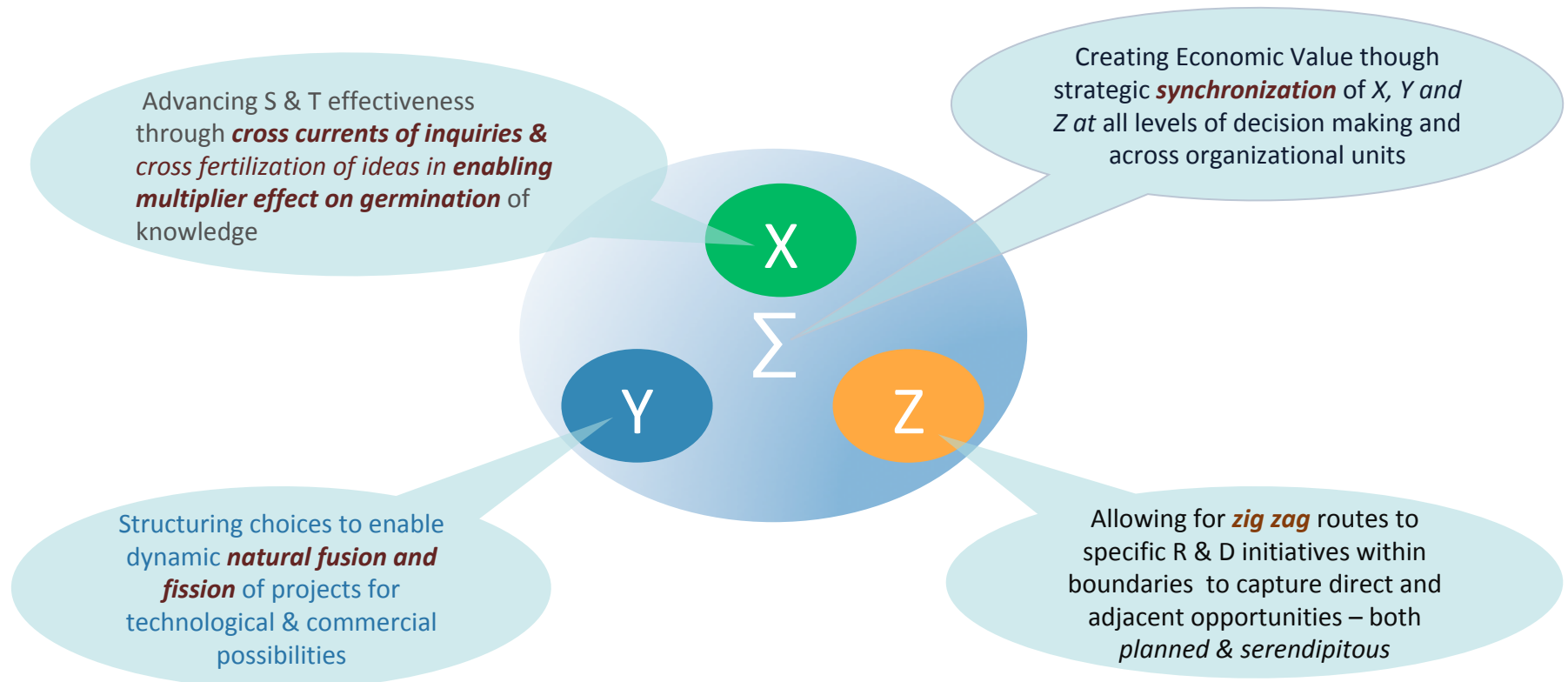
Waves of Organizational Models (1900s to Present)





Innovation Process Framework

XYZ & Σ model (Partha Ghosh model)



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Global order at point of inflection: *Not more and better of the same* - Need fundamentally New Rules of Engagement

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Significant Possibilities ahead: *Uneasy Challenges* - Need a “plus sum” mind-set to connect unobvious dots

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Next Phase *Imperatives*
Of Innovation?

New org models that will drive imaginative capacity: *Beyond sensory perceptions* - to make uncommon connections to think big

Turbulent times: - *in search of* more Efficient Resource Allocation Mechanisms?

