Key Note

"Emerging Markets in Digital World: The Role of Identity"

Summit on Information & Network Security for Emerging Markets

Helsinki, Finland

Date: 20-21 September 2011

Federal Authority | هيئـــــة اتحـــاديـة

Our Vision: To be a role model and reference point in proofing individual identity and build wealth informatics that guarantees innovative and sophisticated services for the benefit of UAE

What are they?

- **BLOCK** of countries setting **New World Order** characterized by Rapid Economic Growth .

- High Rate **Industrialization** .

- High Growth Rates in **GDP** .

- Increase in business; be it commercial or social .
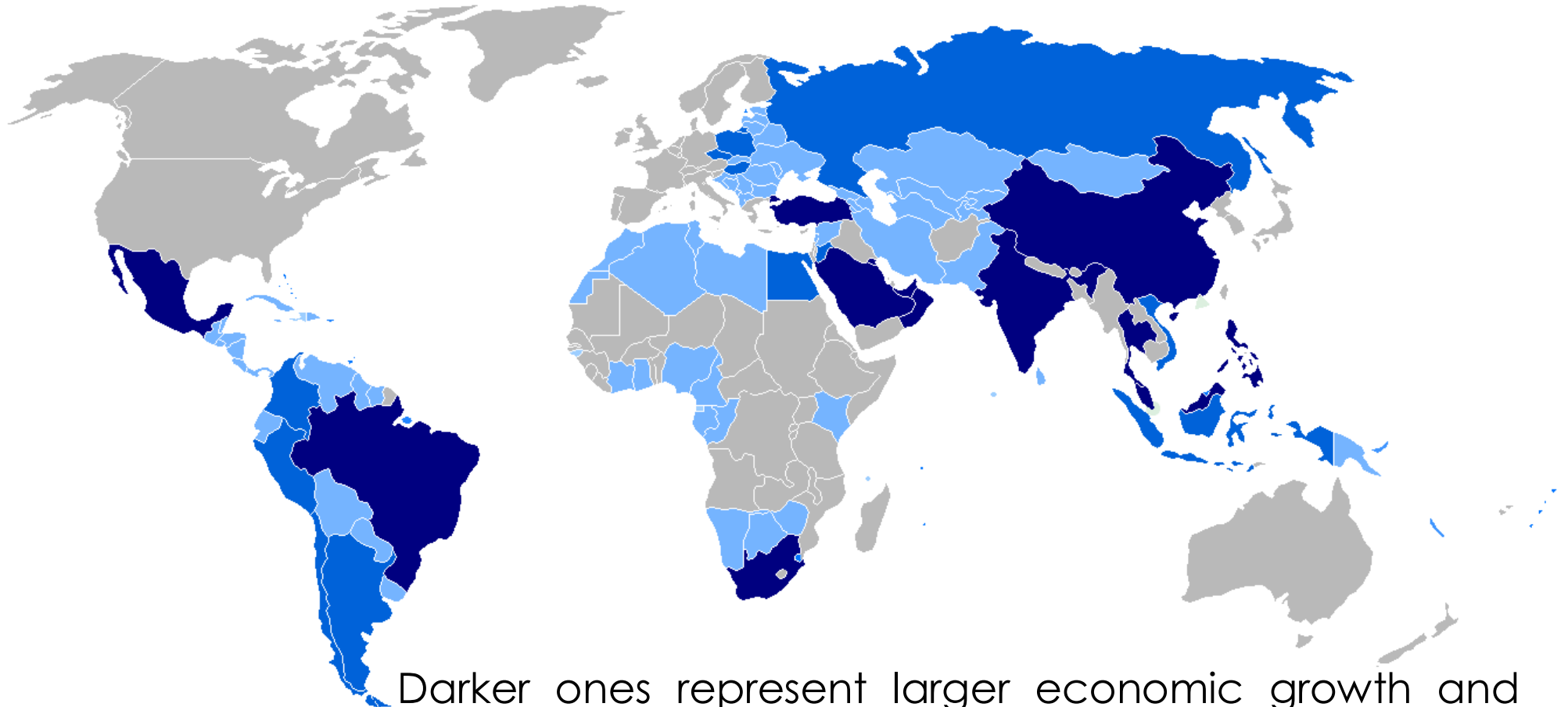
- Big **Economic Power**.

Who are they ?

- Different Standards to determine/define Emerging Markets

- General Consensus in defining them
(about 40 nations across the globe make the cut)

- Countries with economic activity akin to the Western "Developed" Nations
(but not quite there)

Emerging Markets Landscape

These countries spread across 3 Major Continents constitute EMB.
The different shades of blue represent the strength in economic activity.
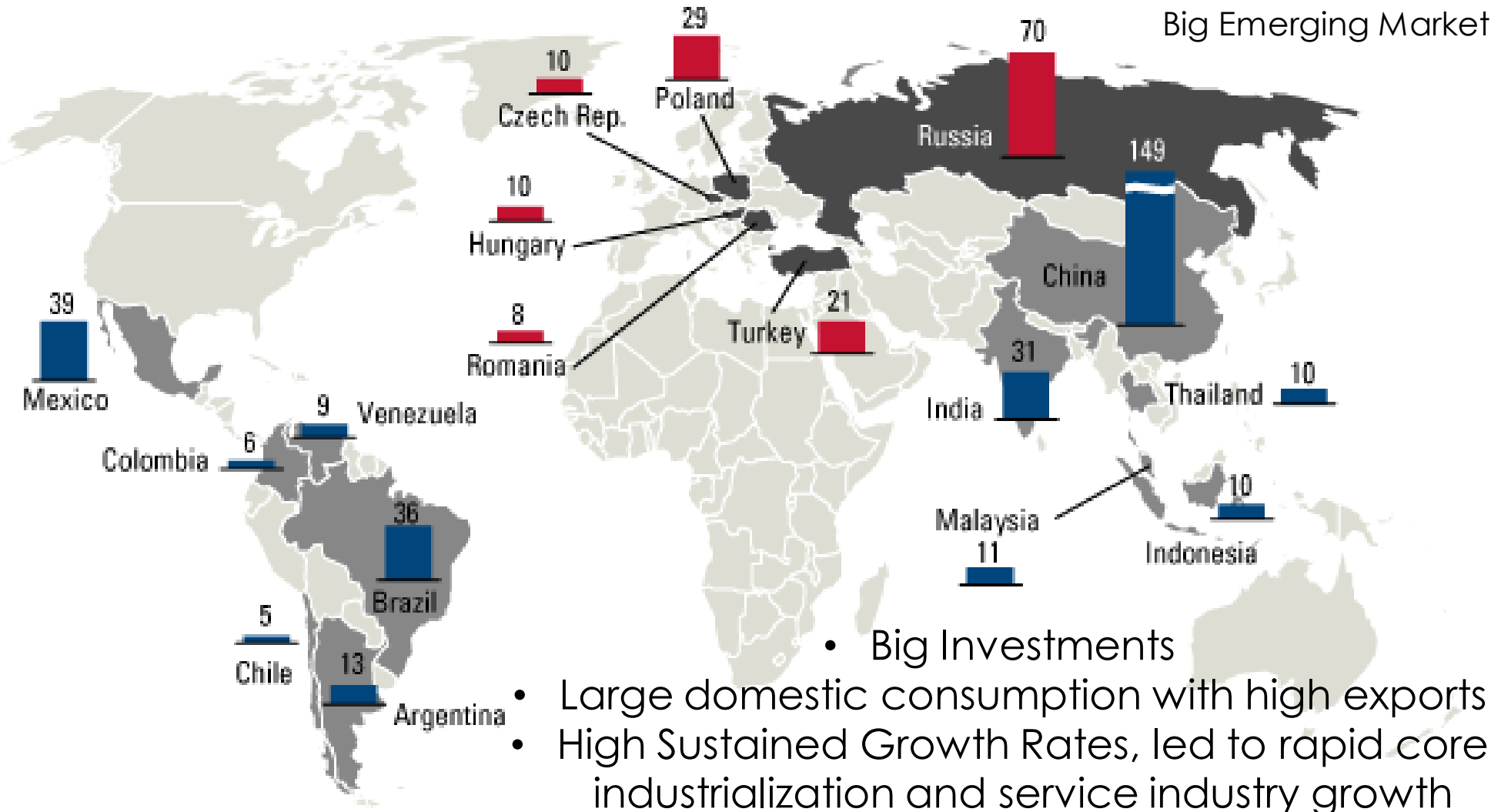

Darker ones represent larger economic growth and business activity. These countries are defining the world trade today and influence global investment decisions.

Big Economic Markets

Of these Emerging Market a few are bigger than the others

some of the nations have higher sustained growth rates than the rest (form BEM).

Big Emerging Market

- Big Investments
- Large domestic consumption with high exports
- High Sustained Growth Rates, led to rapid core industrialization and service industry growth

Emerging Markets Landscape: The Second Bloc- CIVETS

Turkey

Egypt

Vietnam

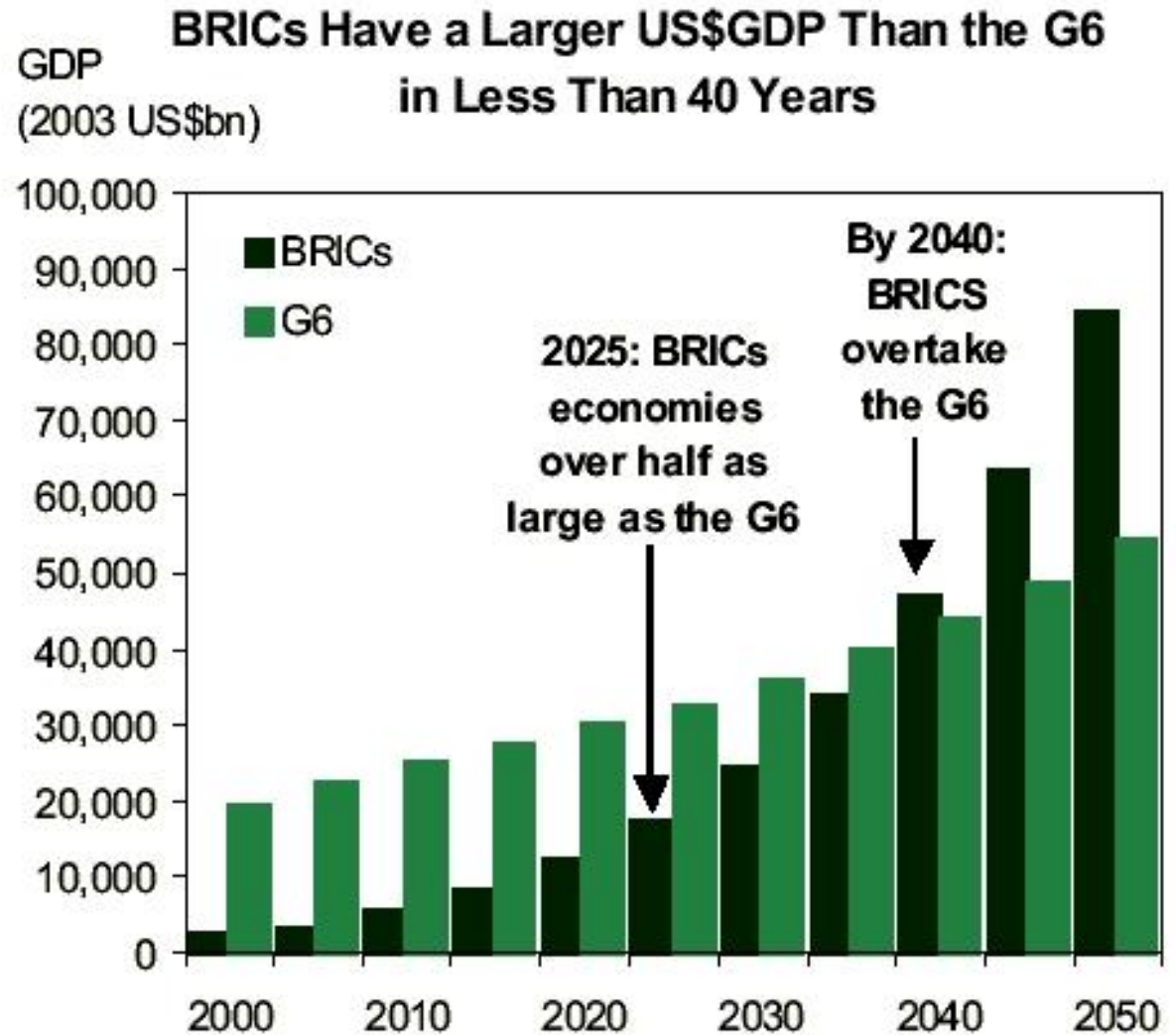Colombia

Indonesia

South Africa
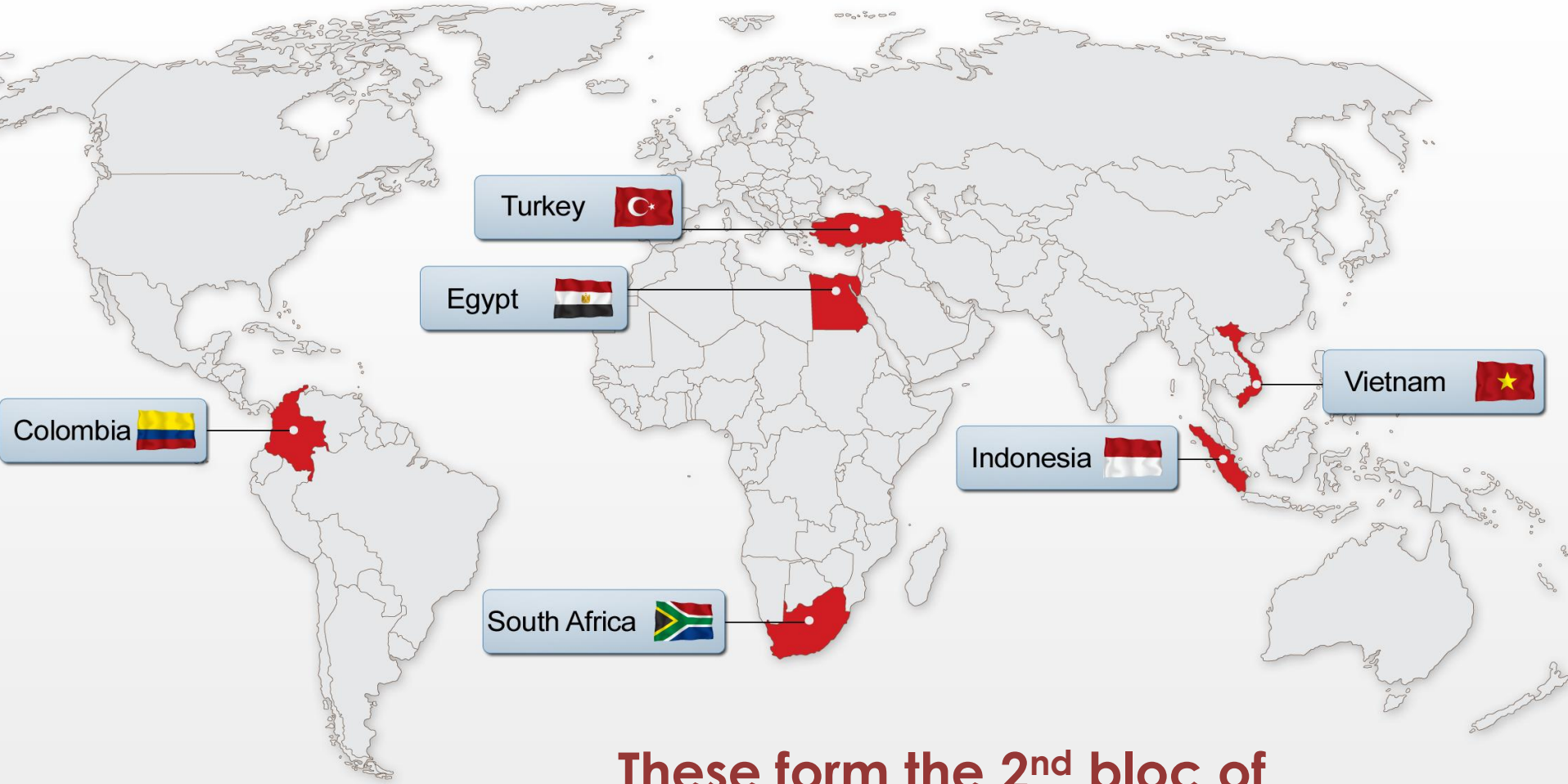
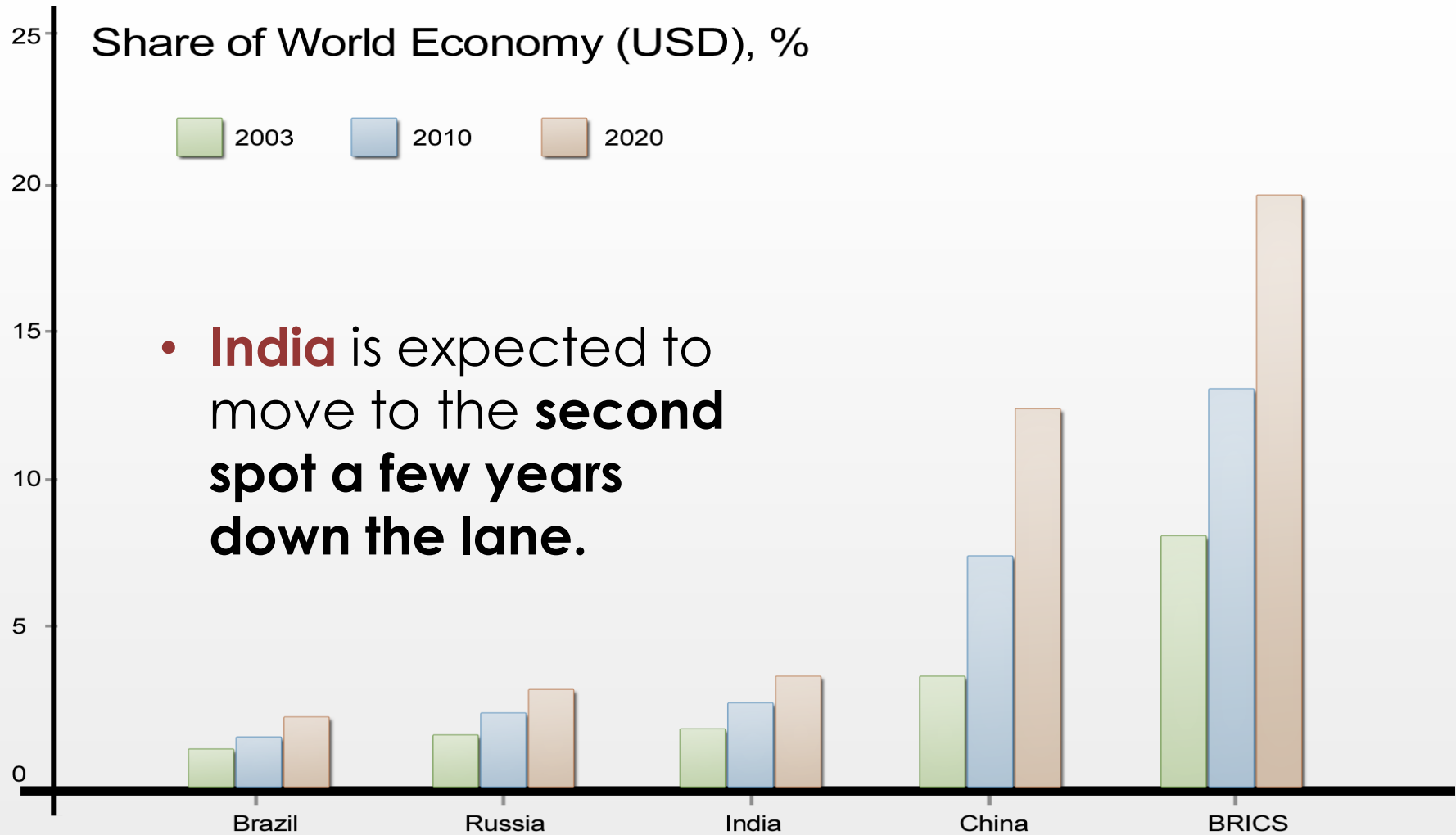**These form the 2nd bloc of emerging markets.**

Emerging Markets Economic Activity

- The largest bloc of emerging markets will yield **more economic power than the G6 Nations.**

- With scorching double digit growth for the last few years, **China is now poised to overtake the USA** in terms of **world trade** to take the #1 spot of **Global Commerce.**
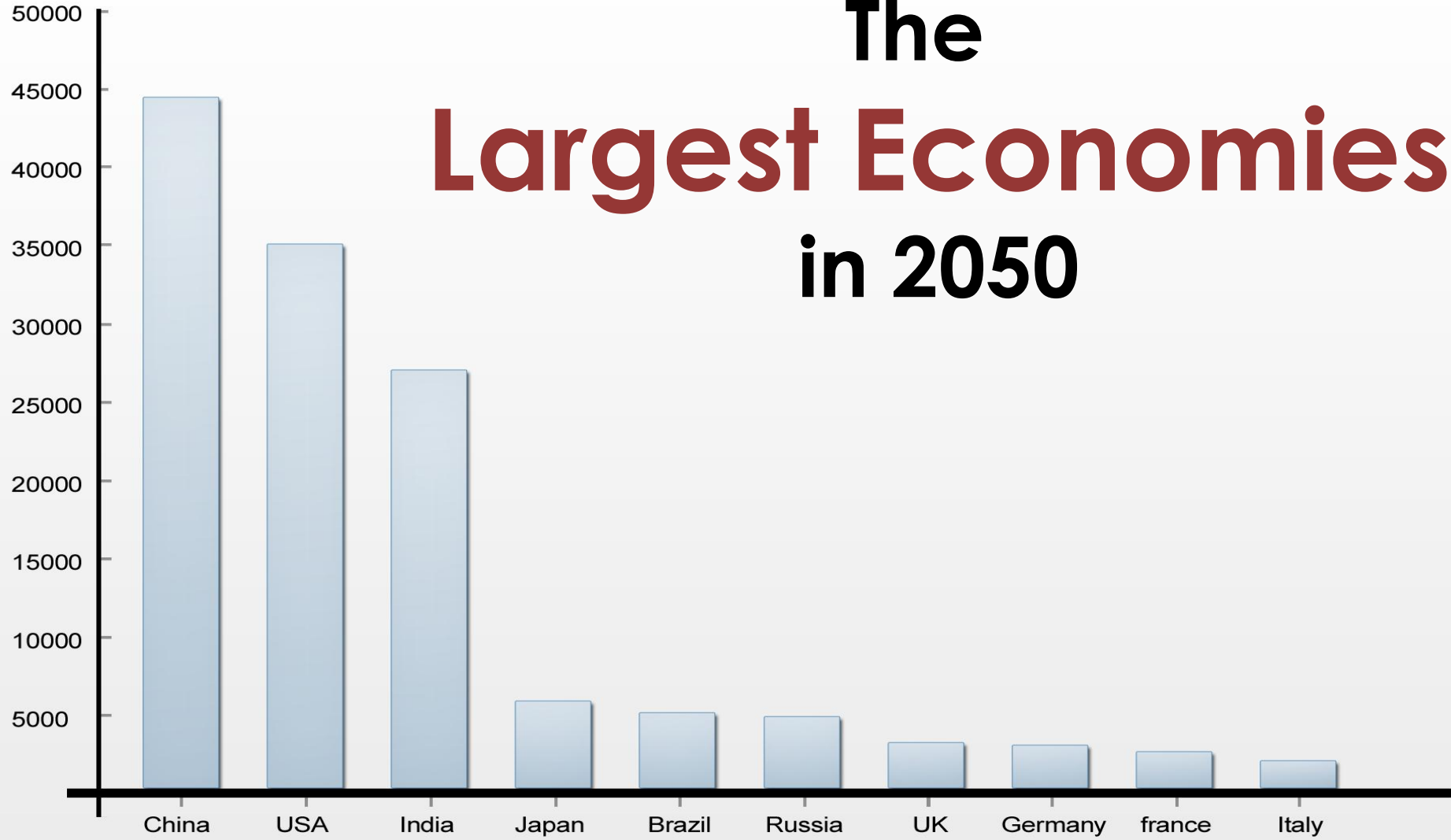

BRICs Have a Larger US$GDP Than the G6 in Less Than 40 Years

GDP (2003 US$bn)

- BRICs
- G6

2025: BRICs economies over half as large as the G6

By 2040: BRICS overtake the G6

Emerging Markets Economic Activity

a small but rapidly growing share of the world

Share of World Economy (USD), %

- 2003
- 2010
- 2020

- **India** is expected to move to the **second spot a few years down the lane.**

Brazil   Russia   India   China   BRICS

Emerging Markets Economic Activity

GDP (2003 US$bn)

The Largest Economies in 2050

Chart: GDP (2003 US$bn) by country

Country	GDP (approx)
China	44500
USA	35000
India	27000
Japan	6000
Brazil	5200
Russia	4900
UK	3200
Germany	3100
france	2600
Italy	2200

Y-axis: 0, 5000, 10000, 15000, 20000, 25000, 30000, 35000, 40000, 45000, 50000

Digital Leap

- **Technology advanced** in sync with the **Industrial output**.

- **Industrial Growth** synonymous with Increased **Productivity**

- Productivity increase signifies **Technological Advancements**

- Better **Communications**

- Higher **Connectivity**

- **Knowledge Based Economy**

Emerging Markets Technology Activity

- ## Industrial Process Automation
  Process **optimization** *necessitated* process **automation**.

- ## Huge Investments in Technology
  Driven by a strong **Domestic Consumption**, the emerging markets have **turned to Technology for improving their productivity** (profitability) rates.

- ## Strong Human Capital
  Backed with a strong pool of skilled Human Resources, technology investments thus **became the order of the day** for these nations.
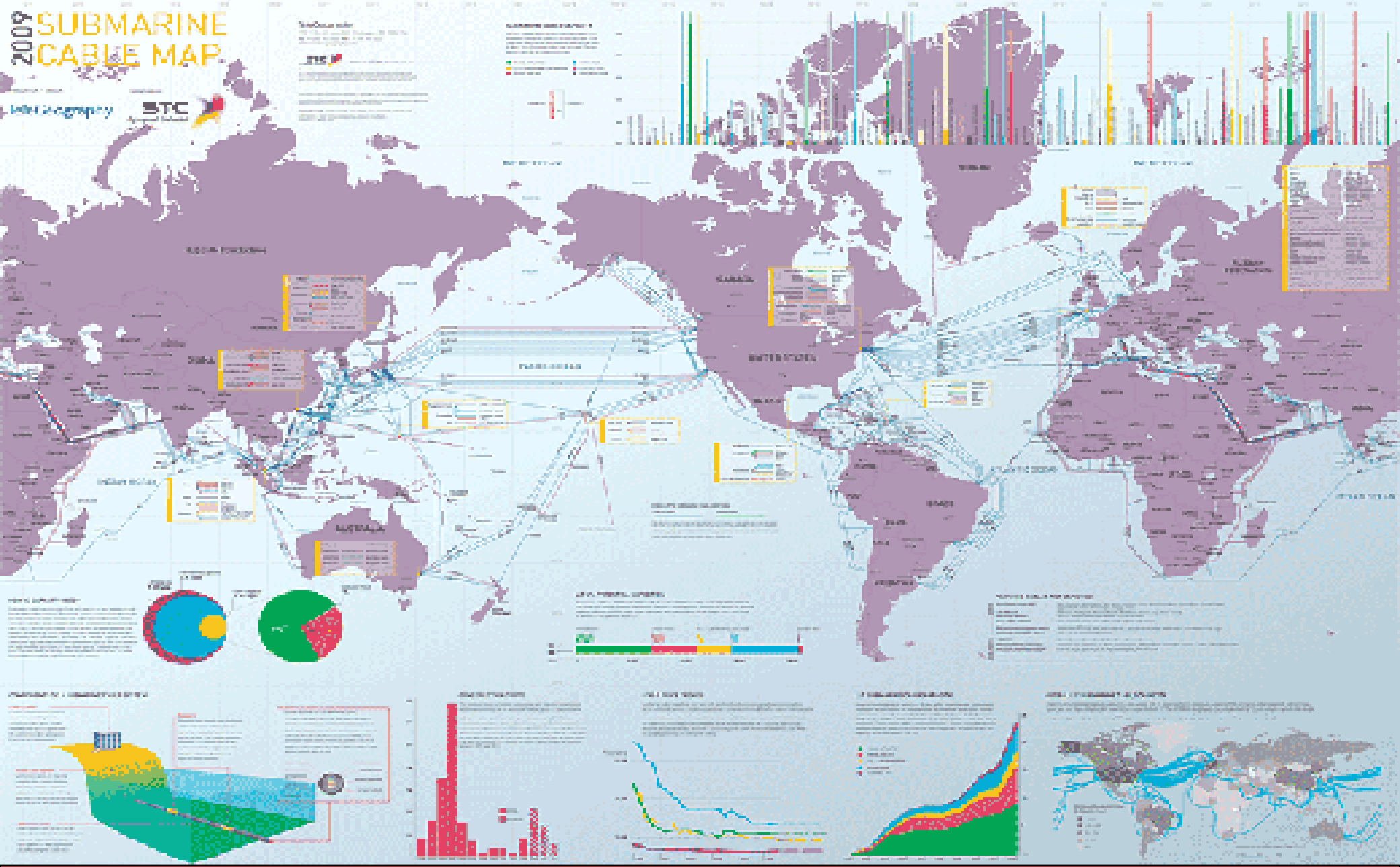
- ## Skipped a whole generation of technology adoption
  The Emerging Market Nations adapted and adopted the **latest in the Industrial, Communication and IT to lead and drive their Knowledge Based Economies**.

One World- Submarine Cable Map

This is the world of today !

The reality is we are ONE WORLD- connected and UNITED on the Information Highway!

- Spurred by Fiber Optic Connectivity
- Driven by Explosive Growth in Internet

The **Developed Nations** are driven by their **need to cut costs**

vs.

the **Emerging Market Nations** driven by their **growth and Technology Adoption.**

This brings in the perfect WIN-WIN situation.

Cable Map - This is what it looks like now. [Image via Telegeography]

Information Highway

Information Networks: Challenges ?

These WIN-WIN situations are fraught with risks and challenges.

- The biggest risk is in **Information Security**, apart from the threats to the physical security to the networks.

- The **Nations need to protect their Intellectual Property Rights** (IPRs).

- **Information need to be Secured**

- Network Security (**Authenticated**)

- **Authorized Access**

Information Networks: Threats & Protection

- Information is a **highly valued commodity** to be protected and saved.

- **Intrusion Detection and Prevention** are increasingly being used to **proactively monitor and thwart the attacks** from the outside world. **There is literally War out there!**

- **Unified Threat Management**

External & Internal Threats

Network Protection - is not enough ?

Proactively manage external threats

Trusted Sources!

Thwart outsider attacks

Information Security: Identity

- Secure Information by **locking it** away and deny access!

- **Information** is needed to **transact and decision making**.

- Information in the hands of the **unauthorized people**?

- Need to **secure the information** and **yet make it available as needed**.

- **Identification** is the **Key to the Information Security**.

"How do we ensure that the right information is provided to the right person at the right time in the right manner to ensure right outcomes"

Who Am I? Am I Really Who I Claim I am?

Information Security

- **Who Determines Identity?**

- What **Constitutes** Identity?

- Who **Provides** Identity?

- Who **Validates** Identity?

- Who **Assures** the Identity?

Information Security

- **Identity Management** has been in the existence at the **enterprise level for more than a decade now** .

- **Governments have traditionally provided their citizens with** paper documents like Passports as **Proof of Identity.**

Digital Identity: A New Paradigm in Info. Security

- **Technological Advances** provide the ability to **verify the identity, validate the credentials and allow transactions**.

- Personal Information and **Unique Identifiers** like **Biometric, Digital Certificates** form the Identification Profile

- Issued by the **Government**, the Identity Profile becomes **Legally Valid** .

- **Electronic Identification** on **Secure Cards** provides the basis for Identity Validation

- **Real time verifiability** provides assurance to the Identity .

- Providing a Digital Identity - Beyond an Identification **Number** or a **record** in the National Population register.

- The **Digital Identity** consists of a digital certificate issued from a Public Key Infrastructure and a set of electronic biometric data.

- The **Identity Issuer** stands for Identity <u>Issuance</u>, Identity <u>Validation</u>, and Identity <u>Verification</u>.

- Together these characteristics provide **irrefutable** and more importantly **verifiable data** for **personal identification**, and, on demand!
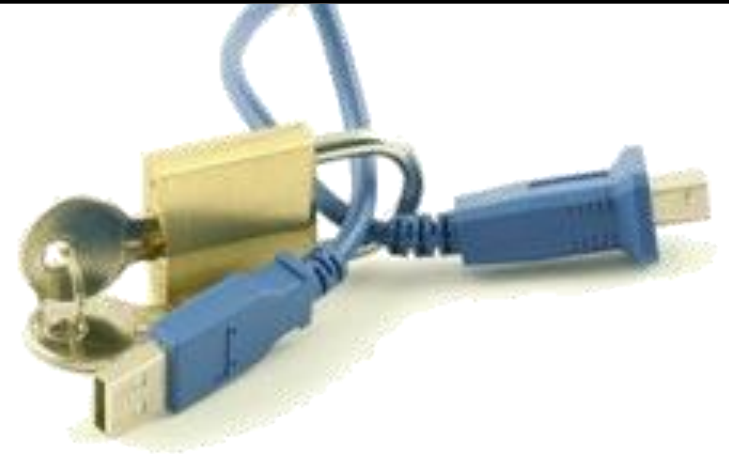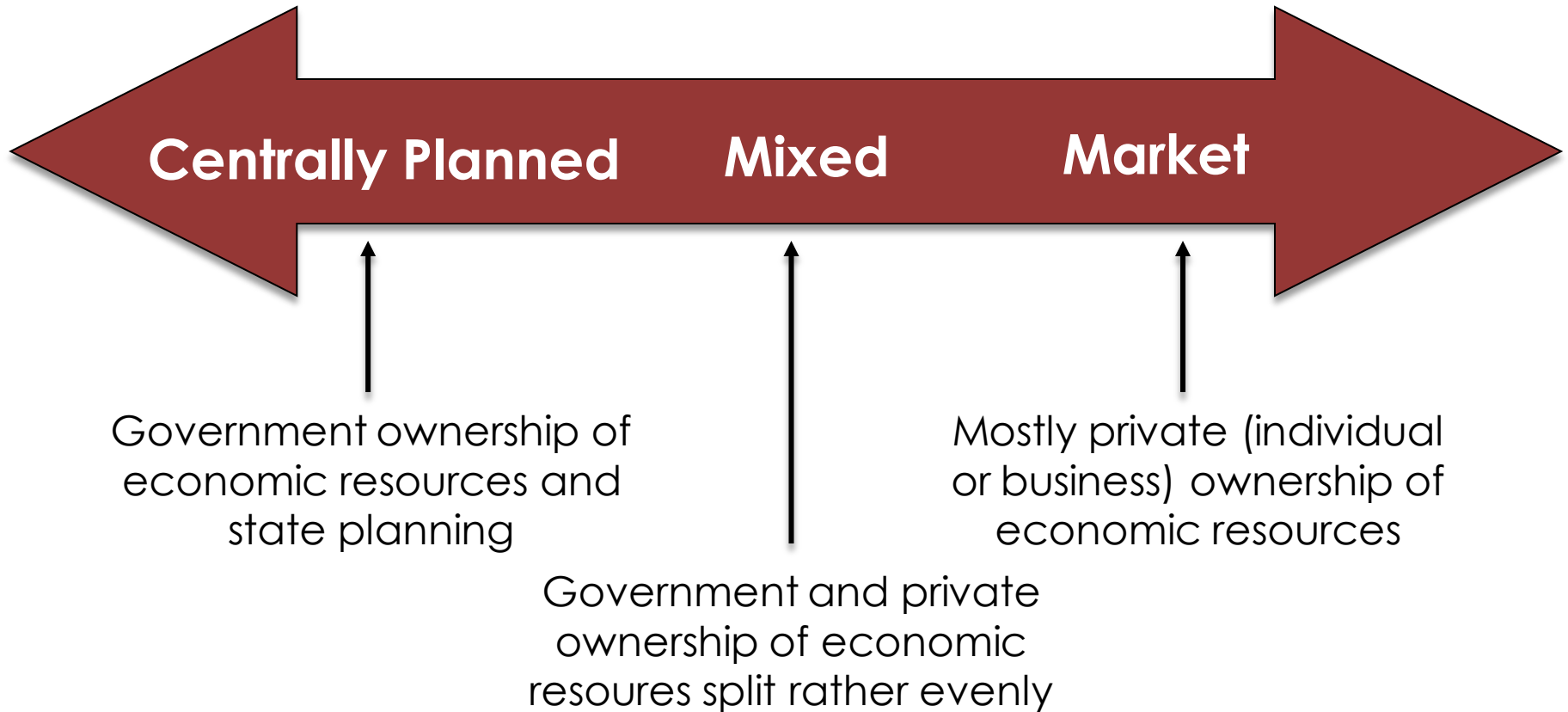
"It needs **commitment**, **political will**, investments in technological **infrastructure** and seamless **network** connectivity."

Economic Systems

refers to the structure and processes a country uses to allocate its resources and conduct its commercial activities

Centrally Planned   **Mixed**   **Market**

Government ownership of economic resources and state planning

Government and private ownership of economic resoures split rather evenly

Mostly private (individual or business) ownership of economic resources

Digital Identities

Past decade

- Countries introduced the Digital Identity

- Emerging Market Nations follow suit on the **digital fast lane**

- **Key Drivers** are **Security** and **ID Theft Protection**

- Technology Utilization in **Electronic Identity Management**

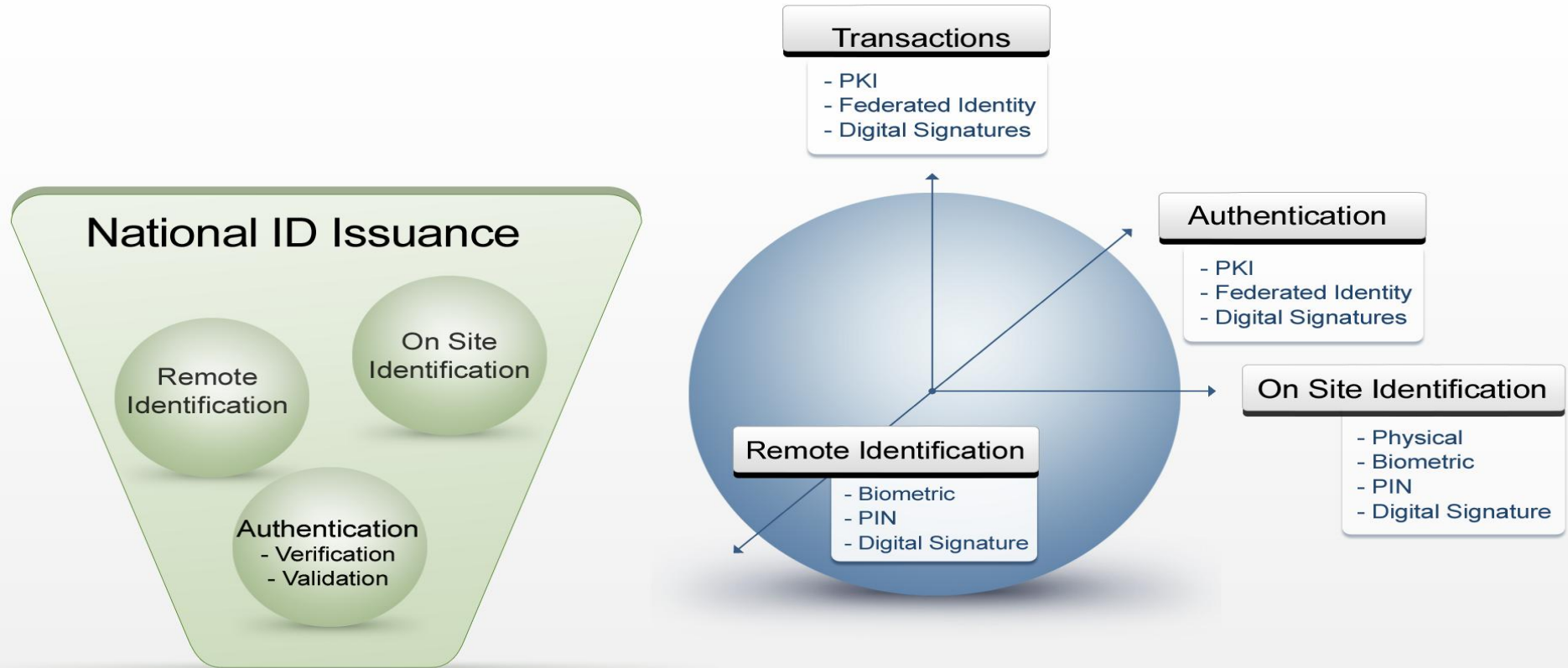- **Electronic Commerce** with **Digital Signatures**
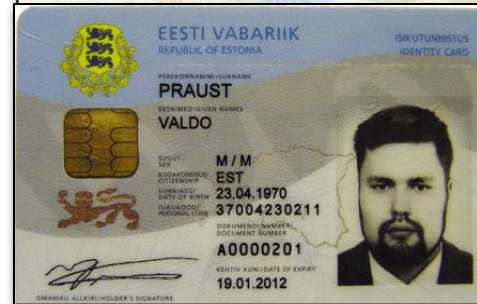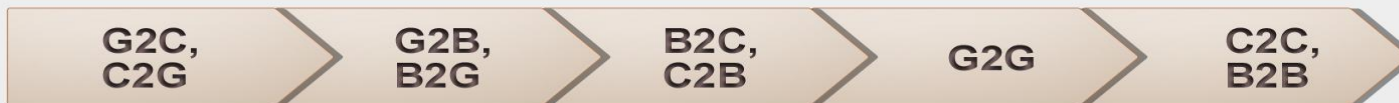
UAE Smart Identity Card

- Physical

- Biometrics

- PKI

- Federated Identity Management

- Digital Signature

- PIN

The Digital Identity Paradigm

Conclusion

- **Integrated world economy** .

- Emerging markets play a major role in **information dissemination**.

- Security in the information dissemination **goes beyond securing the networks** from external threats.

- Information Security is achieved mainly by **managing trust** between the different stakeholders.

- Trust management effectively achieved by the **Digital Identity Management.**

- Digital Identity is largely characterized by <u>two major technologies</u>-**PKI technology and Biometric technology**.

- National **Governmental Initiatives** .

- Identity Management, Establishing and Securing Personal Identity, Profiling, using Personal Information for audit trail and tracking and ultimately providing Authorization to access- physical or logical.

"We need to share knowledge to build better tomorrow"

Thank you

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