

A detailed photograph of a traditional Chinese dragon sculpture, likely a 'Wanglong' (royal dragon), mounted on a tiled roof. The dragon is intricately carved from wood or stone, featuring a long, coiled body with scales, a fierce face with prominent horns and whiskers, and four powerful legs. The background consists of dark green, curved roof tiles with a repeating circular pattern. The overall scene is rich in cultural and historical significance.

**Case Study:
Dalian Commodity Exchange
Liaoning Province, China**

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1911- 92 Years Ago – Dynastic Rule Overthrown

1911-1949 - 39 Years of Turmoil & Civil War

**1949-1976 – 27 Years Consolidation of Revolution,
Ideological Struggles, Bureaucratic
In-fighting**

**1976-1990 14 Years Consolidation of Reforms &
Opening Up Economy/Society to World**

**1990 – 13 Years Ago – First Capital Market Open
in China since 1949 (41 years hiatus)**

Futures in the wild, wild East...

1990 Zhengzhou Wheat Exchange established.

1993 Nearly 40 exchanges & 1000 brokerage firms

1993 Scandals in oil and beans due to price manipulation in illiquid contracts. Little regulation. Firms go bust. Real people lose real money – welcome to capitalism!

The comrades are not happy.

1994 Government crackdown. Speculation causing inflation. Bans contracts on index linked & FX, Sugar, Steel, Coal, Gasoline, Diesel, Oil and Cotton. Trading on foreign futures exchanges banned.

Hot money moves to bond trading – 75% of volume on SSE is bond futures – no position limits or margin controls in place.

Futures in the wild, wild East...

1995 Bond Futures Scandal. Massive short positions. Government changes bond issuance policy (contrary to insider information), 1000s of trades cancelled, traders ordered to liquidate.

CSRC implements higher margin requirements, lower position limits, price limits, and registration requirements of brokers

Liaoning Province skirts regulations through multiple brokers, attempts to manipulate bond futures again. Government shuts down bond futures market for good.

Continued market manipulation in Coffee, Wheat, Mung Beans, Plywood and Rice. Lack of storage facilities encourages price manipulation.

Futures in the wild, wild East...

1996 Scandals continue. Financial institutions banned from futures trading (futures are strictly agricultural). Bank loans for margining no longer permitted. Sugar futures suspended.

1998 CSRC announces plans to merge exchanges and crack down on unregistered or undercapitalized firms.

1998 December – 15 Commodity exchanges consolidated to 3: Dalian, Shanghai, and Zhengzhou. Number of contracts cut from 35 to 17. Margins raised from 5% to 10%. Industry proposes setting up self regulatory organization – China Futures Association

2000 China Futures Association founded.

Futures in the wild, wild East...

2001 Limited foreign futures trading allowed for several large State-Owned Enterprises (SOEs)

2002 Massive consolidation of futures broker firms

2003 CSRC looks at issues of foreign ownership of brokerage firms, foreign trading (QFII), and introduction of oil futures, stock index, and bond futures. No action yet.

Still no overriding futures regulations or laws.

Key Lessons Learned (the hard way)

Lack of Regulation

Lack of Enforcement

Lack of Price Discovery

Lack of Liquidity in Market

Hence,

No Lack of Manipulation

The Remains of the Day...

Crude Risk Controls – Haphazard margin methods & collateral tracking, mark-to-market & variation margin not implemented uniformly. No sophisticated performance bond calculation.

Lack of Delivery Functionality – Spot & Futures Markets disconnected. Crude delivery/storage setups.

Fragmentation of Clearing – Tracking customers and large position reporting nonexistent. No backoffice services and customer reporting.

The Remains of the Day...

Counter-party Risk – Exchanges do not function as primary counter-party and no procedures for orderly liquidation of markets when counter-party fails.

New Product Introduction not Systematic – Exchanges do not explore demand for hedge products, availability of underlying markets, or appropriate speculator design.

Underlying Markets Subject to Large Player Concentration – No regulation of competition, price setting, bond issuance, manipulation in local markets except those influenced by world prices.

Where we are today with futures...



Business Issues for DCE

National Market with country-wide access & low level of fragmentation

Transparent Automated Trading System

Sound, Robust and Safe Market Infrastructure

Rapid and Speedier Price Dissemination

Efficient Warehouse Receipt System

Integrated Clearing & Settlement System & linkages with warehouse receipt system

Heterogeneity & Capital Adequacy of Market Participants

Institution of centralized national level Clearing Corporation on lines of Options Clearing Corporation OCC in USA

Technology Issues for DCE

Move the Exchange to Beijing and use Dalian as Backup Site

Implement an Open Common Messaging Infrastructure

Replace 7 year old Core Business Applications with World-class

Develop an Open Standards-based Data Architecture

Use internationally recognized industry standards e.g FIX/CFP

Develop a Straight Through Processing (STP) Infrastructure

Develop Real-time Market Surveillance System

**Migrate from Exchange-owned Clearing & Settlement Systems
To a National Clearing House – e.g. spin-off C&S into an independent
China Clearing Corporation business.**

Learn and Use Enterprise Architecture Development Methodology

Bearing with the Burden...of Architecting

One Month of Training of What Comprises an Enterprise Architecture

TOGAF version 7 and version 8

Case Study Examples of Exchange Architectures:

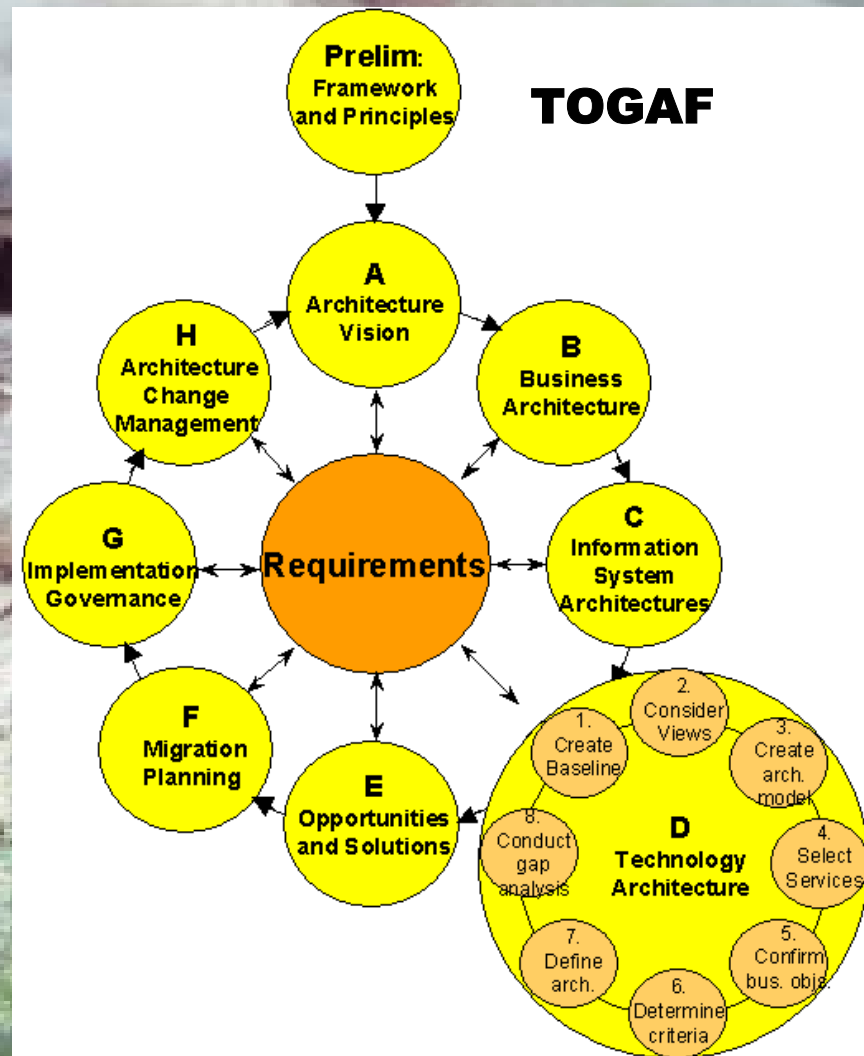
- 1. Hong Kong Exchange's "eFrastructure Financial Services Infrastructure Architecture" and FINET**
- 2. Singapore Exchange's STP Initiative**
- 3. NYSE / SIAC's SFTI Secure Financial Transaction Infrastructure**
- 4. World Bank's "Domestic Architecture of Financial Sectors in Developing Countries"**
- 5. Kuala Lumpur Malaysia's "Single Malaysian Exchange"**

Case Study Examples of Other Architectures:

- 1. Dairy Farm Group use of TOGAF**
- 2. C4ISR and TAFIM**
- 3. Federal Enterprise Architecture**
- 4. Treasury Enterprise Architecture Framework - TEAF**

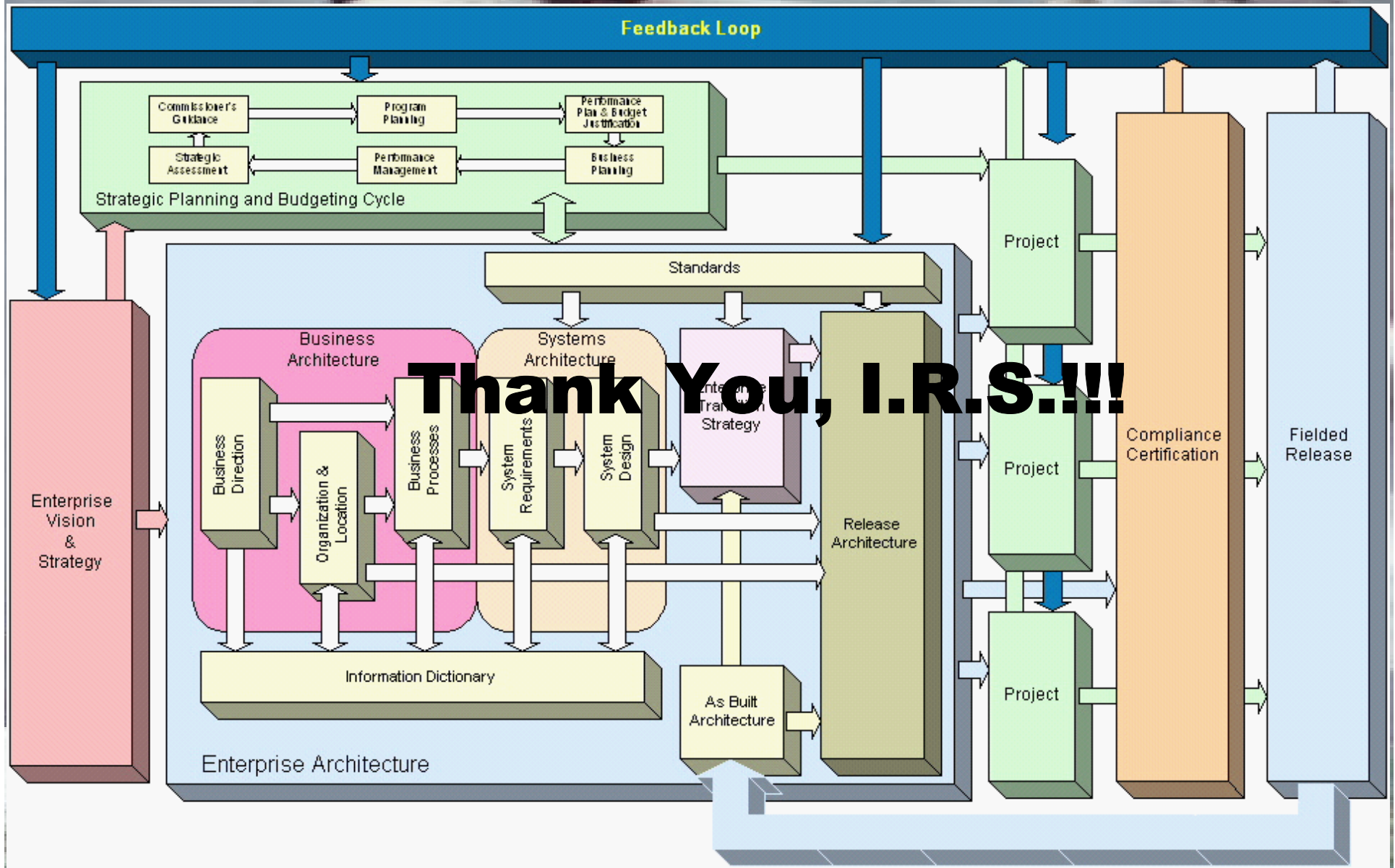
Bearing with the Burden...of Architecting

Illustrating and Explaining the Development Cycle



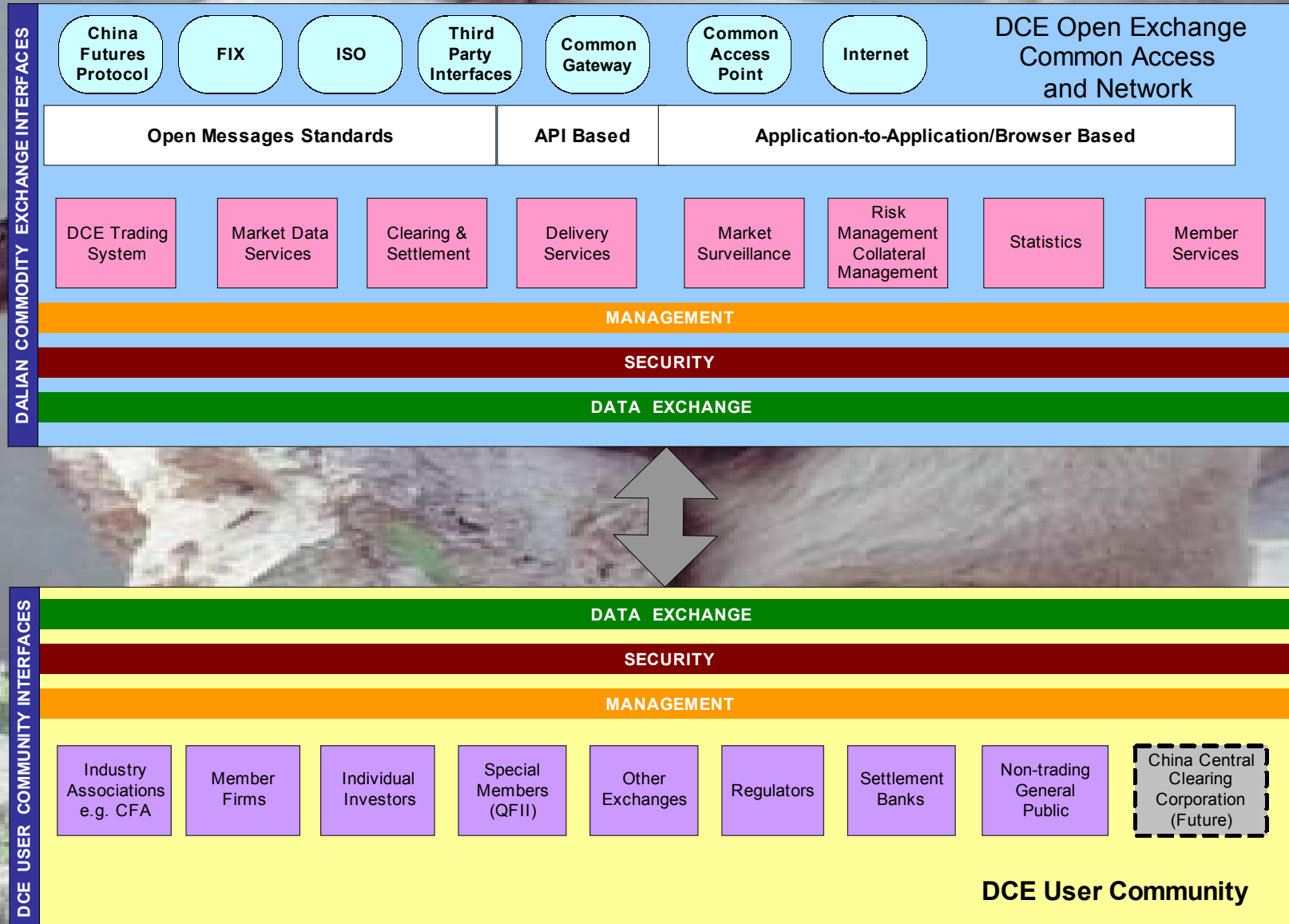
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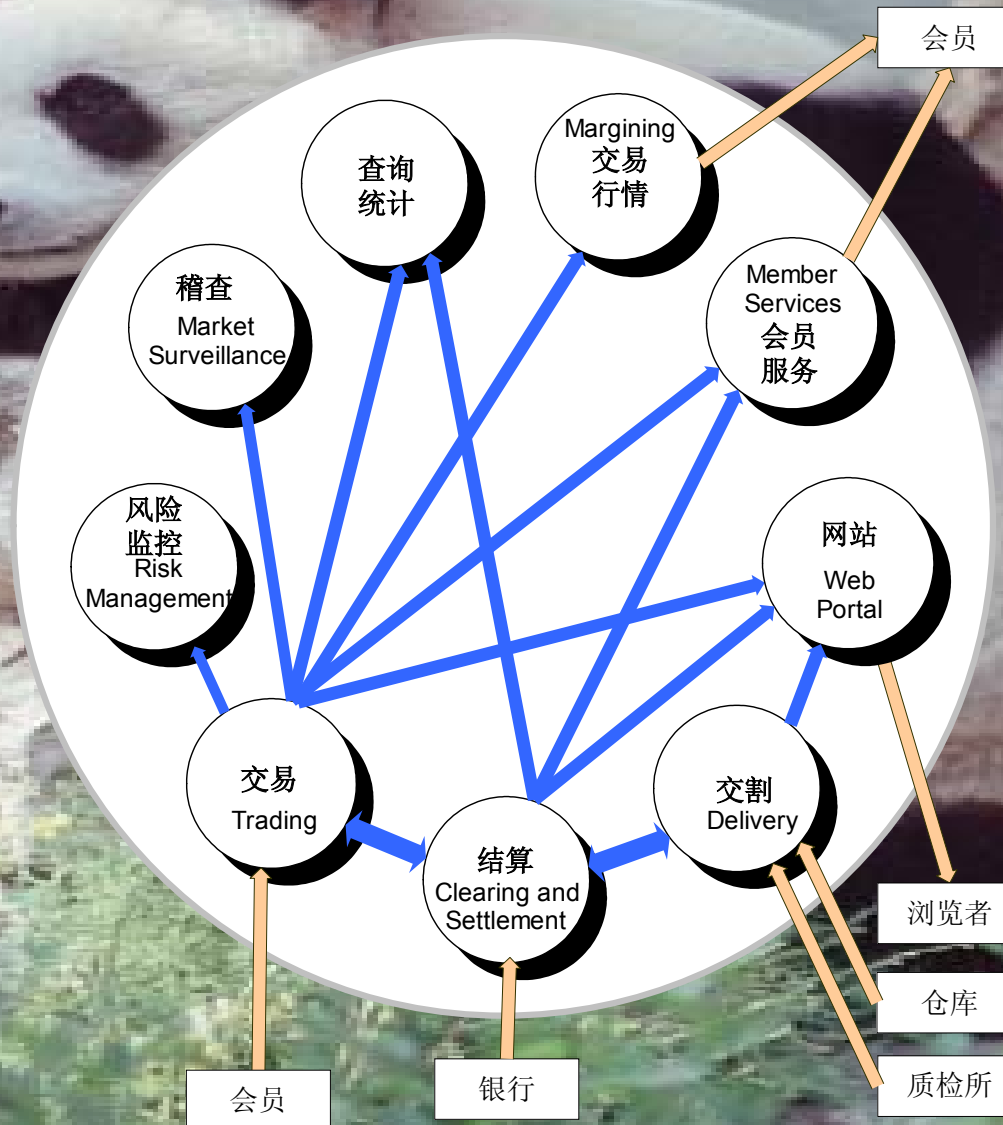
Bearing with the Burden...of Architecting

Developing a Target Architecture Vision of DCE



Bearing with the Burden...of Architecting

Defining the Business Process Domains and CBR of DCE

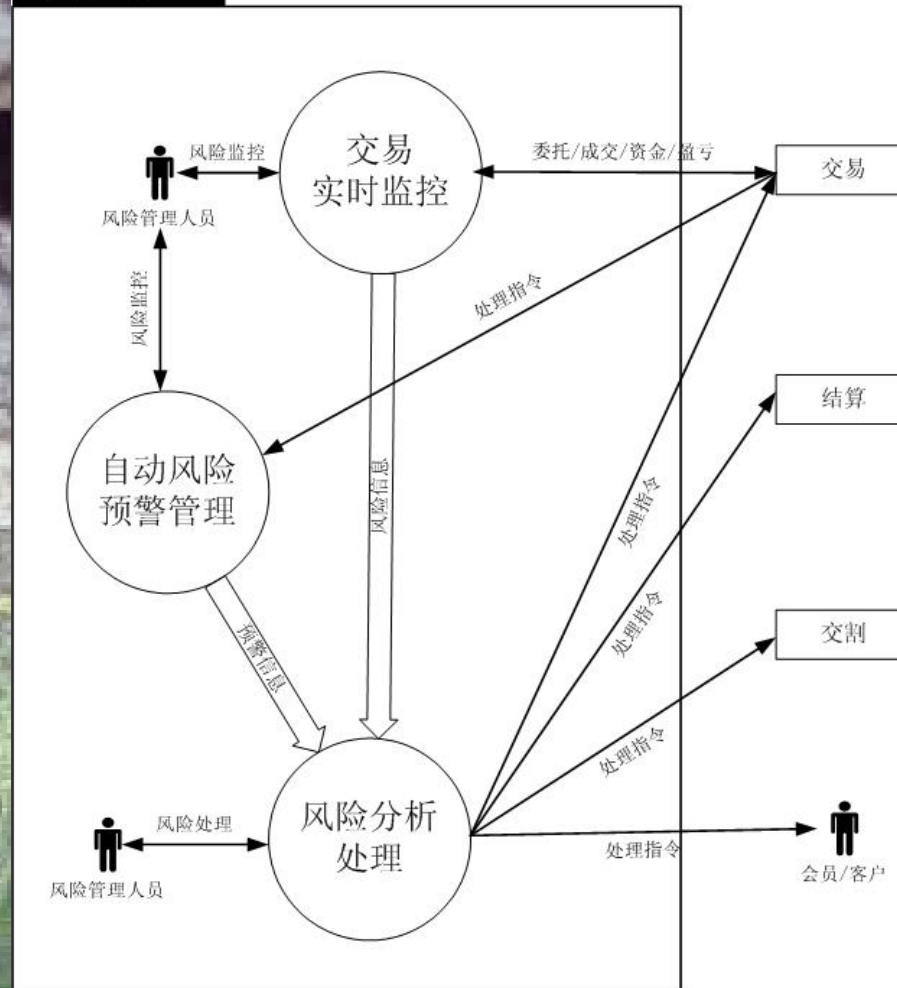


Bearing with the Burden...of Architecting

Defining the Business Process Domains of DCE

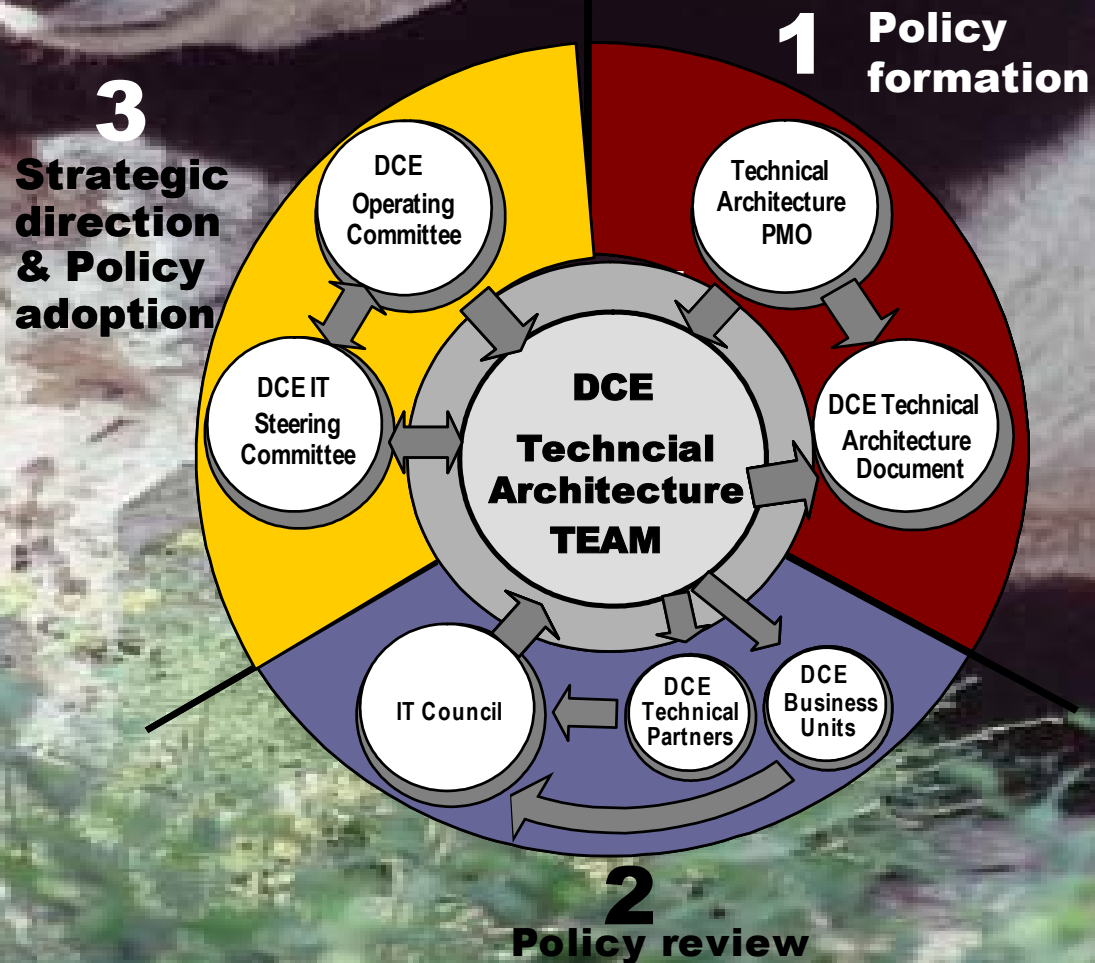
Dalian Commodity Exchange of China
风险管理 BPD

风险管理

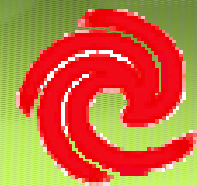
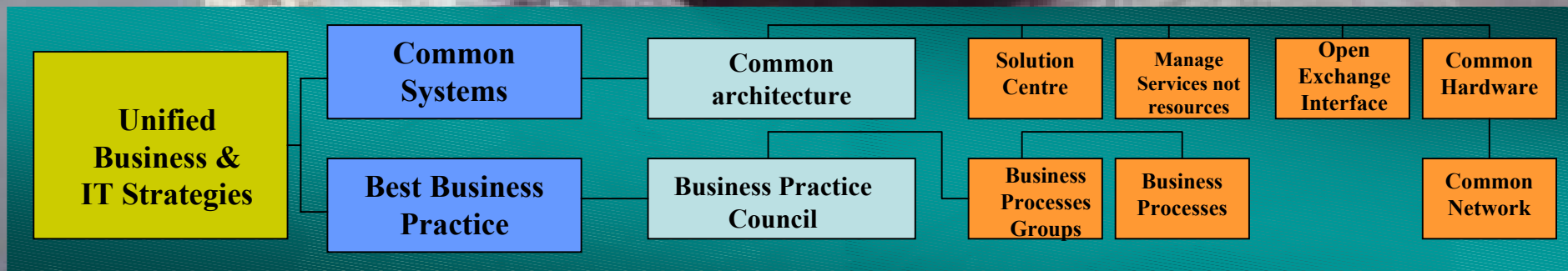
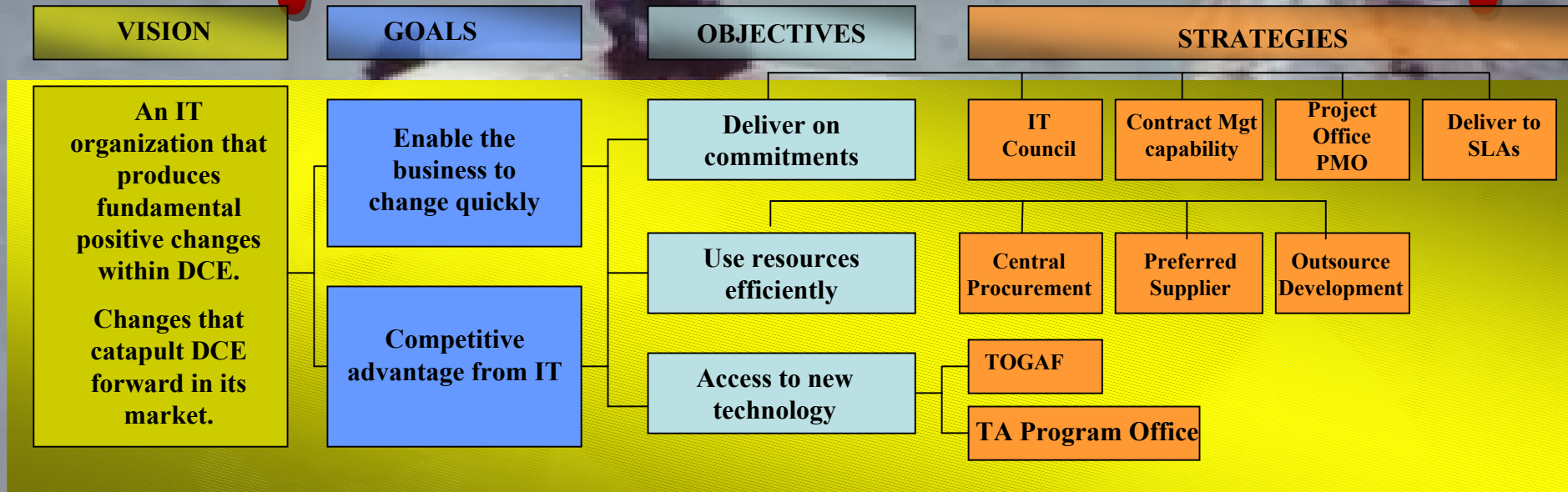


Bearing with the Burden...of Architecting

IT Governance and Organization MOST DIFFICULT Concept

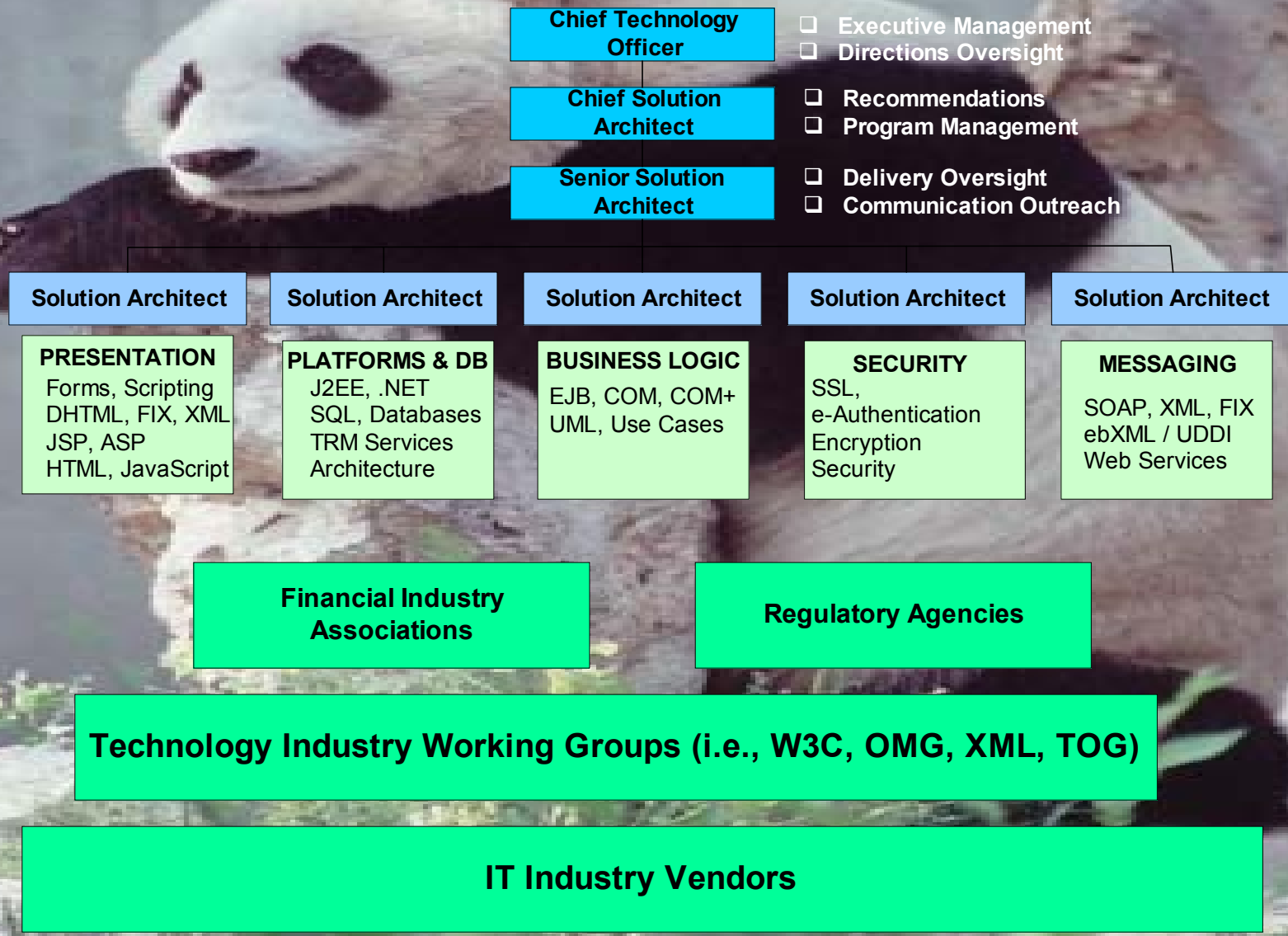


Bearing with the Burden...of Architecting



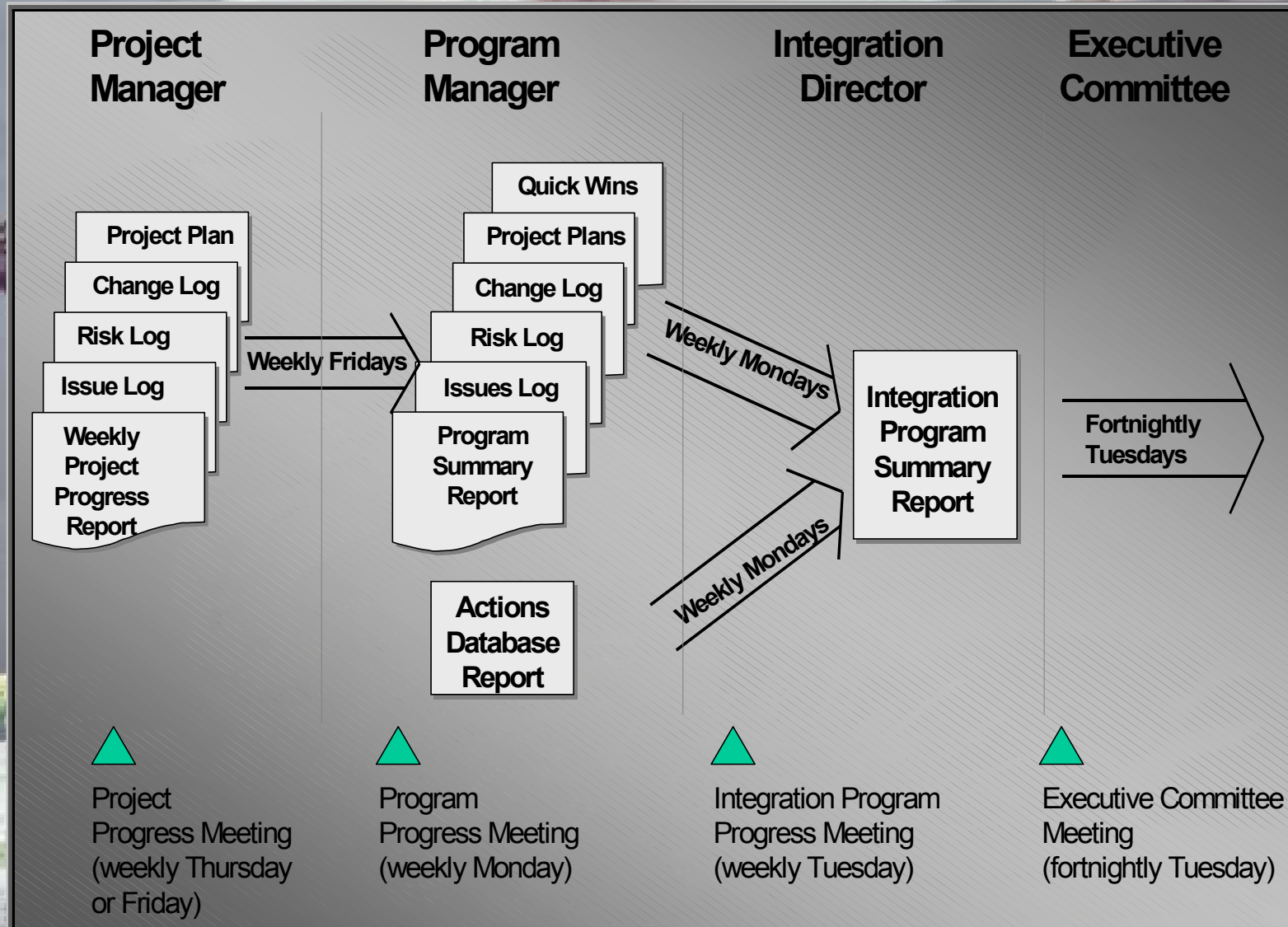
Bearing with the Burden...of Architecting

IT Governance Technology Architects MOST DIFFICULT Concept



Bearing with the Burden...of Architecting

IT Governance DCE Program Management Reporting Concept



Bearing with the Burden...of Architecting

Measuring the Maturity of TA in the DCE

STAGE	DESCRIPTION	SATISFIED
<p>Stage 5 Leveraging the TA for Managing Change. [Includes all elements of Stage 4]</p>	<ul style="list-style-type: none"> ▪Written/approved policy exists for TA maintenance ▪Either IT Steering Committee or IT Council has approved TA ▪Matrices exist for measuring TA benefits 	
<p>Stage 4 Completing Architecture Products [Includes all elements of Stage 3]</p>	<ul style="list-style-type: none"> ▪Written/approved policy exists for IT investment compliance to TA ▪TA products describe enterprise's business – data, applications, and technology that supports it ▪TA products describe “as is” environment, “to be” environment, and sequencing plan ▪CIO has approved the TA plan 	
<p>Stage 3 Developing Architecture Products [Includes all elements of Stage 2]</p>	<ul style="list-style-type: none"> ▪Written/approved policy exists for TA development ▪TA products are under configuration management ▪TA products describe <i>or will describe</i> enterprise's business – data, applications, and technology that supports it ▪TA products describe <i>or will describe</i> “as is” environment, “to be” environment, and sequencing plan ▪TA scope is enterprise focused 	
<p>Stage 2 Building the TA Management Foundation</p>	<ul style="list-style-type: none"> ▪Committee or group representing the enterprise is responsible for directing, overseeing, and/or approving TA. ▪Program office responsible for TA development exists. ▪Chief architect exists. ▪TA being developed using a framework and automated tool. ▪TA plans call for describing enterprise in terms of business, data, applications, or technology. ▪TA plans call for describing “as is” environment, “to be” environment, or sequencing plan. 	
<p>Stage 1 Creating TA Awareness</p>	<ul style="list-style-type: none"> ▪The Exchange is aware of TA 	

The End Game for DCE

Managing highly-developed electronic systems to support the services and functions of DCE

Constantly enhancing the technological infrastructure to ensure DCE leads in innovation and open systems in China and be ready to plug-in to the global arena

Creating an open Application Program Interface (API) to trading & clearing platforms to facilitate Straight Through Processing (STP)

Balancing IT resources with business needs with a customer driven focus

Blending in-house development and strategic outsourcing to yield cost-effective and efficient solutions

Closing Thoughts

**"You can't create experience.
You must undergo it".**

Albert Camus

**"If you got them by the architecture,
their hearts and mind will follow".**

John Wayne

A detailed photograph of a traditional Chinese dragon sculpture, likely a 'Long' or 'Longzi', mounted on a tiled roof. The dragon is intricately carved from a light-colored material, possibly stone or wood, and is depicted in a dynamic, coiled pose. It has a long, flowing mane, large eyes, and a long, segmented body. The background consists of dark green, curved roof tiles. The text 'Thank You Very Much!' is overlaid in a large, bold, red font across the center of the image.

Thank You Very Much!

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