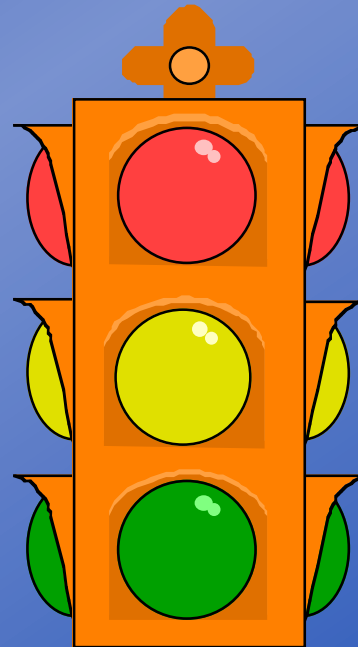# Command & Control At the Cross-Roads

Professor Derek K Hitchins

Command & Control— Decisions and their Execution

➤ "The exercise of authority and direction by a properly designated *commander* over assigned forces in the accomplishment of his *mission*.

➤ Command and Control functions are performed through an arrangement of personnel, equipment, communications, facilities and procedures which are employed by a commander in *planning, directing, coordinating* and *controlling* forces and operations in the accomplishment of his mission."

Publication 1, US Joint Chiefs of Staff

C2, Doctrine, Strategy & Tactics

Themes:—
- Decisiveness
- Doctrine
- Leadership
- Discipline
- Force cohesion
- Decision space

Agility, mobility

Command architectures → Decisiveness

Manoeuvre warfare

Perception → Judgement

Vision

Command (team) training

Schwerpunkt

Auftragstaktik

Leadership

Discipline

Doctrine

Precedent, practice

Command & Control

Force cohesion

Situation archetypes

Campaign analysis

Organizing → SOPs

Limited decision options

Deploying

Agility, mobility

Rules of engagement

Activating

Limitations of forces under command

Peace Dividend—Uncertainty

- Cold War —predictable, high tech. stand-off
  - NATO reinforced by WP, and *vice versa*
- Peace has brought:—
  - Granby/Desert Storm
  - Former Jugoslavia
  - Ethiopia
  - Granada
  - Panama City…
- …different lessons, new ideas, CNN Effect, even more politics…

Manoeuvre Warfare

How two nations can use the same words to mean quite different things

- American Football analogy
  - series of set pieces
  - attackers have covert plan
  - hit opposition at all points
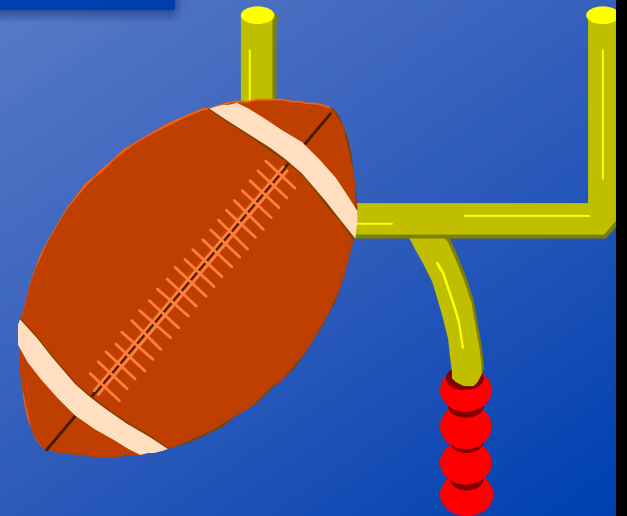
US Manoeuvre Warfare

- Hit enemy in depth (Panama City 26—28 separate points simultaneously)
  - communications
  - information sources & sensors
  - command centres
  - *shatter* the enemy
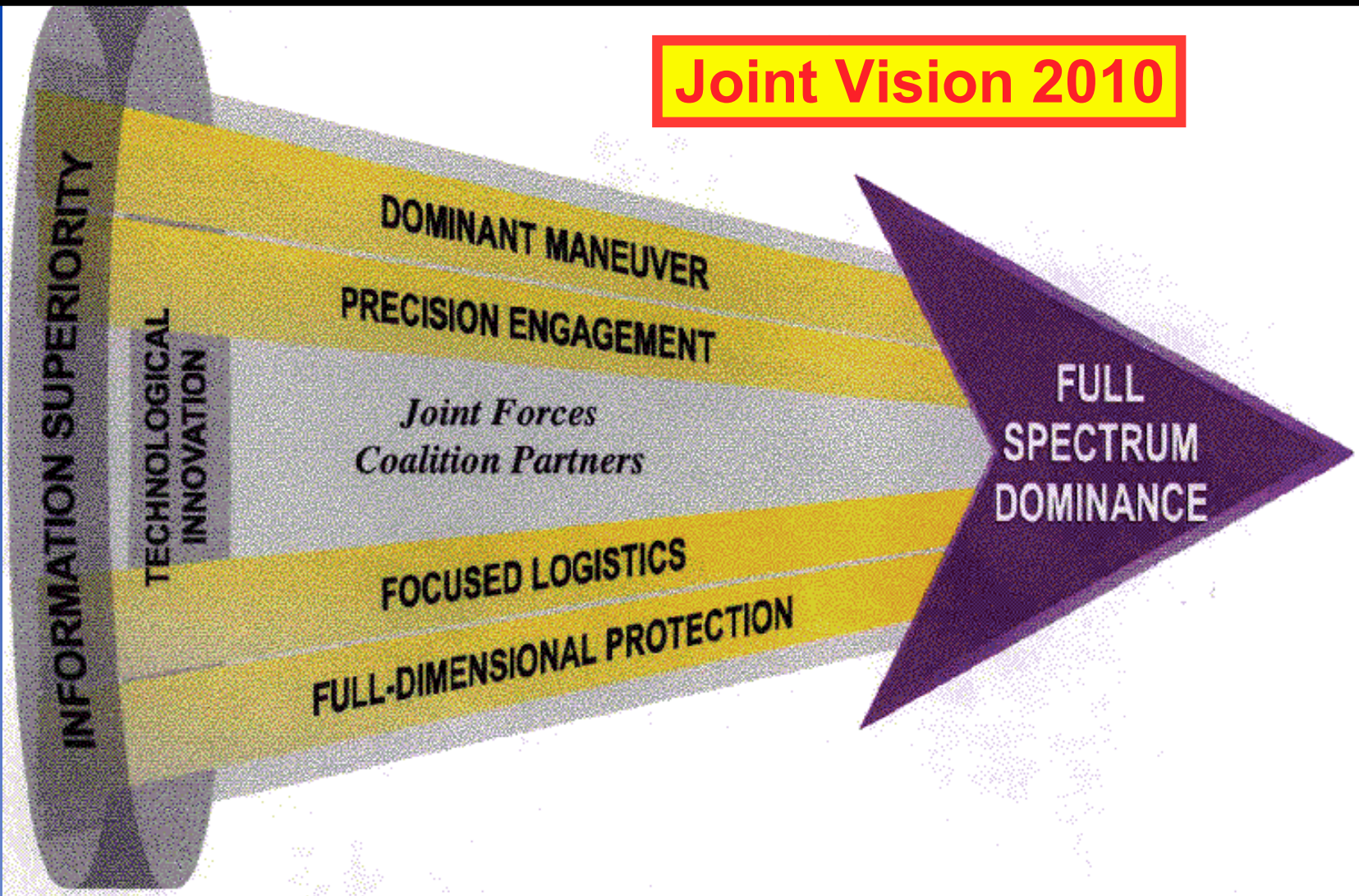- …no subsequent opposition
- This is *Information* War

US View of
Manoeuvre / Information Warfare

Extracts from BBC2 Horizon Programme

Joint Vision 2010

INFORMATION SUPERIORITY

TECHNOLOGICAL INNOVATION

DOMINANT MANEUVER

PRECISION ENGAGEMENT

Joint Forces Coalition Partners

FOCUSED LOGISTICS

FULL-DIMENSIONAL PROTECTION

FULL SPECTRUM DOMINANCE

Advanced Technologies → **New Operational Concepts and Doctrine** → **Organizational Change**

ABIS Capability Framework

•Execution of Time-critical Missions
•Integrated Force Management
•Participative Planning and Preemption

•Consistent Battlespace Understanding

- - - - - - -
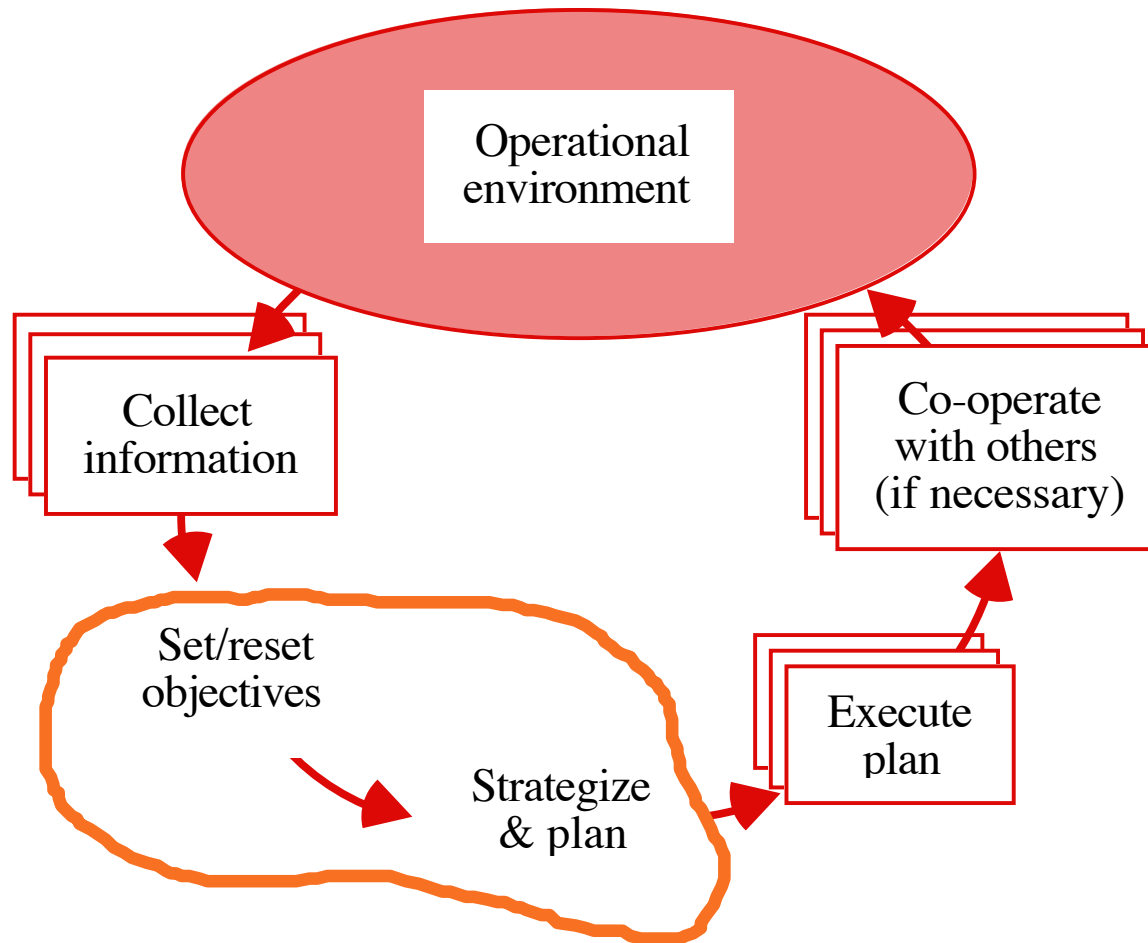
•Precision Information Direction

•Distributed Environment Support

- - - - - - -

•Universal Transaction Services
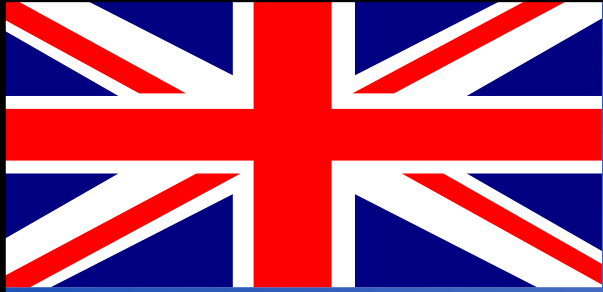
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•Assurance of Services

- **Effective Force Employment**
  - Rehearse, Evaluate and Adapt Plans Rapidly
  - Synchronize Distributed Force Operations
  - Acquire Targets, Execute Timely Response

- **Battlespace Awareness**
  - collaborative situation awareness
  - Consistency of view across all forces
  - Tailored Information Distribution

- **The Information Grid**
  - Single federation of heterogeneous Information Systems
  - Infrastructure support of distributed processes, Information search and collaborative work
  - Seamless responsive communications
  - Assured managed resources support mission priorities

ABIS—Flat C² Organization

Operational environment

Collect information

Set/reset objectives

Strategize & plan

Execute plan

Co-operate with others (if necessary)

- Separates Planning from Execution
- All planning done at high level, in depth, in detail

UK View
of
Manoeuvre Warfare

UK View of Manoeuvre Warfare?

- Soccer analogy
  - fluid game, players moving on and off ball
  - strategy, but detailed plan develops as game progresses
    - mission command
  - fast moving, *blitz-krieg* action

UK Manoeuvre Warfare

- Mobile forces acting in concert to outflank, outmanoeuvre (mobile?) enemy

- Fluid, unpredictable, forces enemy on to "back foot"

- Requires commanders with initiative, flexibility, mutual trust, shared goals

UK Manoeuvre Warfare

- Hence *Auftragstaktik*, Mission Command

  - every officer develops planning and command skills at every level

- Hence regimental system

  - personal knowledge, shared experiences, mutual trust…

N.B. Both US and UK, in different ways, reflect Ghengis Khan's Command & Control of exclusively-cavalry forces

Commander	Tasking	Decisions	
Enemy ORBATS, intentions	Intelligence	Enemy ORBATS, intentions	Needs
Operations Plans	Operations Plans	Operations	Needs, priorities
	Constraints	Constraints	Logistics
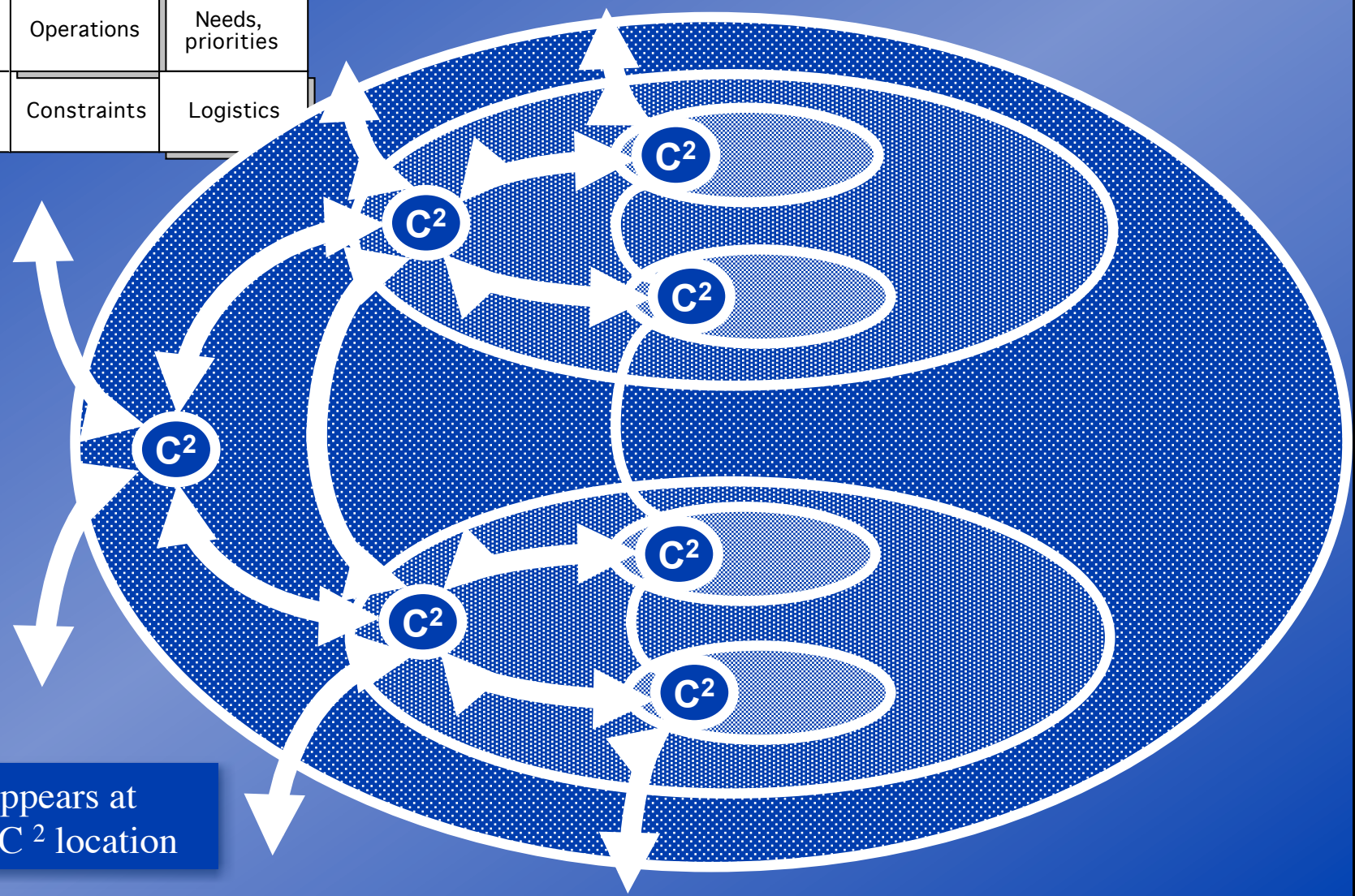
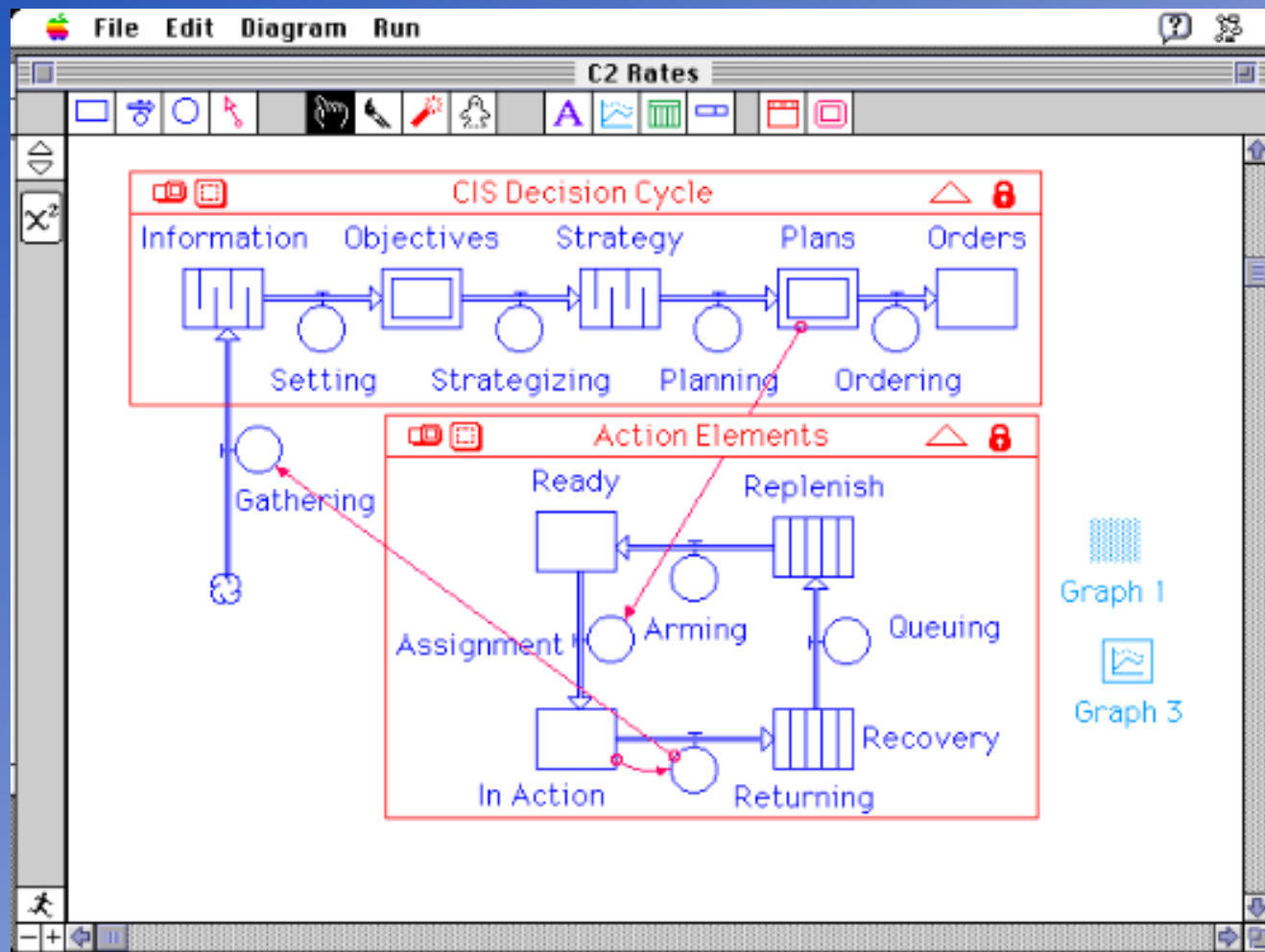N.B. N^2 chart appears at each and every C^2 location

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Comparing Flat-planning and Fractal C² Decision-making
—Flat Planning

- Centralized high-level planning* promises
  - optimal employment of resources across whole battlespace, plus
  - close political/financial control
- Takes maximum advantage of / heavily dependent on (according to viewpoint) communications and processing technologies
  - creates extensive technology target to enemy
- Execution element potentially isolated from planning, and *vice versa*
  - potential for "us-and-them" friction/loyalties/cultures, and…
  - "efficient", impersonal, inhuman(?) decisions/executions

Flat organization faster, extensive, but brittle?

* May be dispersed using technology, but still essentially one system

C² speed determined by Force under Command

- Virtually indestructible—same generic capabilities at each level.
    - fractal structure ideal to accommodate chaotic battlespace
- Inherent "succession" training
- Will continue to operate without communications for extended periods
    - so, does UK need digitization?
    - probably, if only to inter-operate with US
- Potential to adapt in real time, e.g. peacekeeping

Fractal organization slower, but adaptable and robust?

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Command and Control of Policing

- Military yet to make best use of *Indigenous Police* in UN Policing Ops.
    - local contacts, good intelligence
    - philosophy—force is *last resort*
        » they will still be there when military depart
- Integrated UN Force—Indigenous Police Command & Control?

- New-ish role for Forces
- Heavily politicized—even *titles* are fraught
- UK, Surrey Police are leading exponents
  - selling expertise worldwide
  - use following 3 terms, with specific meanings & police "behaviours" at each level

Peacebuilding
Peacekeeping
Peacemaking

Peacemaking, Peacekeeping, Peacebuilding

- Peacebuilding—Level 3
  - CARE Stops and Reinforcement
  - proactive Multi-Agency long-term problem solving
- Peacekeeping—Level 2
  - PACE Stops and Enforcement
  - proactive visible policing, patrolling, interaction
- Peacemaking—Level 1
  - reactive crime fighting
  - fast reaction stops build-up

Based on comprehensive Operational and Criminal Intelligence

Notional Area Profile

enter / show

| Orgs… | Level 2 | | |
| Medical… | Contacts… | Knowns… | Officials… |

Alpha Patrol

People

Events

Places

Housing…

Utilities…

PHouses…

TKs

Churches…

Parks…

Disused…

Schools…

Domestics

Chases…

Begging…

Drunks…

Brawling…

Burglaries…

Muggings…

Neighbours

Traffic…

Aggressive begging—fourth of 6 complaints

22/9—23/9/97 Ref 1064…

Thornliebank

Gifnock

Williamwood

Clarkston

Sheddens

Busby

N

Environment

| Graffiti… | Damage | Rubbish | Decay | |
| Clearup | Repair | Clearup | Restore | Statistics… |

Predict…

VCR Mode

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C^2 Deployment

The C2 decision pyramid

Doctrine-consistent group decisions

• Decision-space limited by beliefs, doctrine, information and intelligence

Training
Doctrine →

Doctrinal models of conflict management

• e.g. positional, manoeuvre, peacekeeping, peacemaking, peacebuilding, campaigns…

Intel →
Info →

Technology-supported, decision-forming processes

• communications, processors formed to support paradigm

Training

Group-decision-making paradigm

• worldview of group decision-forming structure

Role-relationship structure

• social genotype, roles bonded by shared beliefs
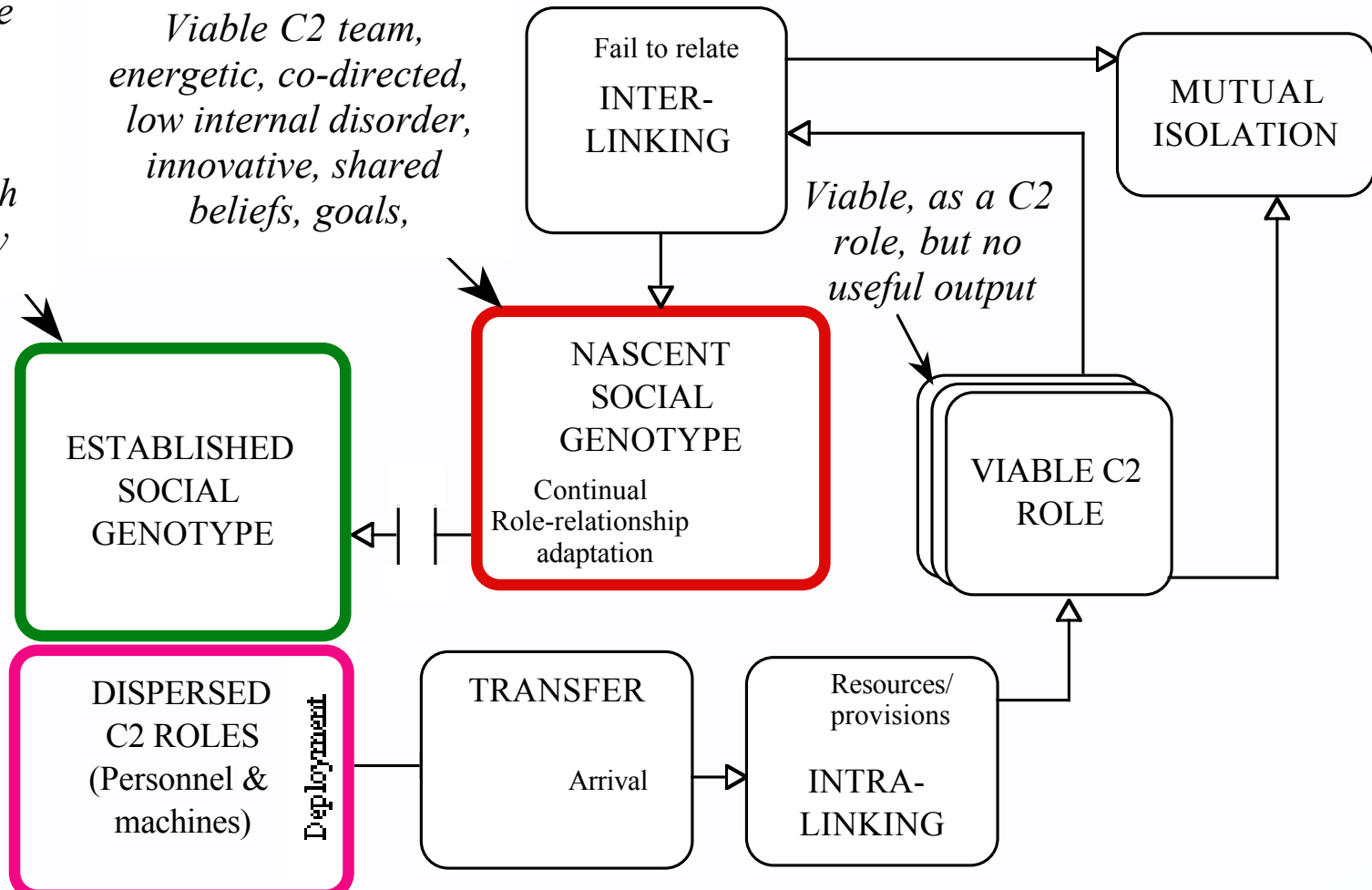
Energetic cohesive social fabric

• shared beliefs, culture
• motivated self interest

N.B. C2 organizations will set in place each of the lower layers in turn, finally producing the top level output

C² Start-up—State Model

Coherent, stable behaviour & performance. Controlled, predictable, high internal energy

Viable C2 team, energetic, co-directed, low internal disorder, innovative, shared beliefs, goals,

Fail to relate
INTER-LINKING

MUTUAL ISOLATION

Viable, as a C2 role, but no useful output

NASCENT SOCIAL GENOTYPE

Continual Role-relationship adaptation

ESTABLISHED SOCIAL GENOTYPE

VIABLE C2 ROLE

DISPERSED C2 ROLES (Personnel & machines)

Deployment

TRANSFER
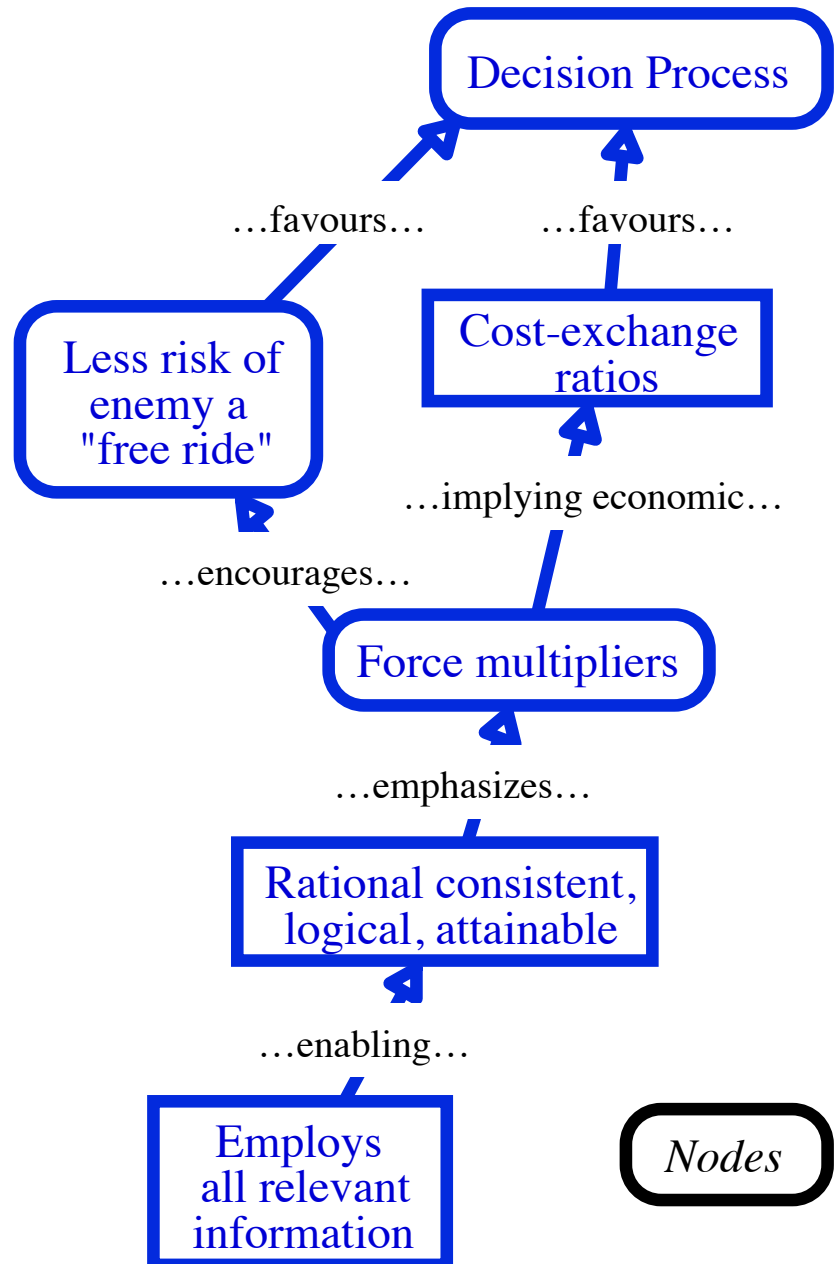
Arrival

Resources/ provisions

INTRA-LINKING

Decision-making & Decisiveness

- making decisions
- "good" decisions

**Good Decisions:
The Comprehensive
Process Viewpoint**

Decision Process

…favours…   …favours…

Less risk of
enemy a
"free ride"

Cost-exchange
ratios

…implying economic…

…encourages…

Force multipliers

…emphasizes…

Rational consistent,
logical, attainable

…enabling…

Employs
all relevant
information

Nodes

Decision Outcome

…favours…

Improves control of / reduces entropy in/ disordered situation

…to keep opposition on the back foot…

Fast & decisive

…which demands that decisions be…

…to become…

Rate of Change of situation

Anticipate reaction

…decisions provoke…

…expert decisions under stress…

Bold, unpredictable

Good Decisions: Never mind the Process —does it work? Viewpoint

Nodes

Decision Outcome

…favours…

Improves control of / reduces entropy in/ disordered situation

…to keep opposition on the back foot…

Fast & decisive

…which demands that decisions be…

Rate of Change of situation

…decisions provoke…

…to become…

Anticipate reaction

…expert decisions under stress…

Bold, unpredictable

Inspires confidence

- self belief
- morale
- cohesion

…reduces vulnerability…

Less risk of enemy a "free ride"

…encourages…

…favours…

Decision Process

…favours…

Cost-exchange ratios

…implying economic…

Force multipliers

…emphasizes…

Rational consistent, logical, attainable

…enabling…

Employs all relevant information

Decisions: Outcome vs. Process vs.?

Nodes

Belief System Battle

Assyrians besieging a city

—from the Assyrian Marbles, British Musem