

Scott Maxwell

# **THE PRINCIPLES OF OPERATIONS**

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# INTRODUCTION

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- Principles of Operations in War
- How they can be applied to IS Operations
- Conclusions

# WHO AM I?

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- Lt RN, Engineering IS Officer
- Served on:
  - HMS Cumberland (Small Ship)
  - HMS Albion (Big Ship)
  - HMS Illustrious (Very Big Ship)
- Service Delivery Manager HMS  
RALEIGH
- UK TRIDENT Targeting Officer '07-'10
- Re-civilianised Mar 2010



# NUCLEAR OPERATIONS AND TARGETING CENTRE



(See [www.secret-bases.co.uk](http://www.secret-bases.co.uk))



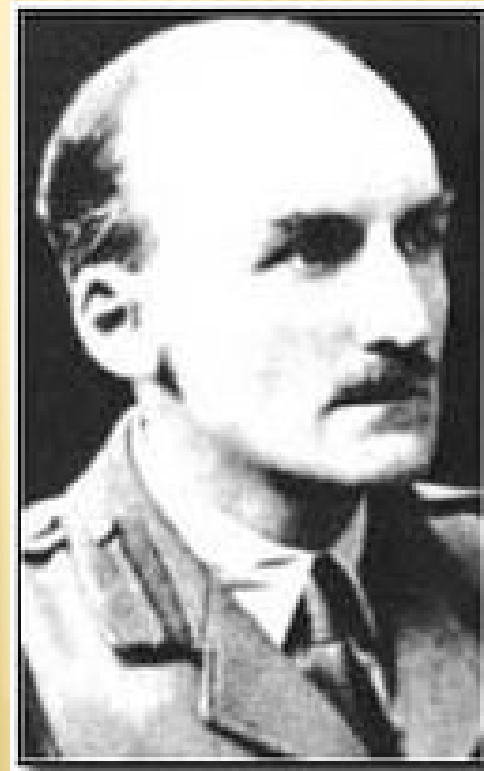
# NUCLEAR OPERATIONS AND TARGETING CENTRE



# NUCLEAR OPERATIONS AND TARGETING CENTRE



# PRINCIPLES OF OPERATIONS (I.E. WAR)





# PRINCIPLES OF OPERATIONS (I.E. WAR)



# PRINCIPLES OF OPERATIONS

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- Selection & Maintenance of the Aim
- Maintenance of Morale
- Offensive Action
- Security
- Surprise
- Concentration of Force
- Economy of Effort
- Flexibility
- Sustainability
- Cooperation

# SELECTION & MAINTENANCE OF THE AIM

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- Master Principle
- Single unambiguous aim
- Cdr's intent communicated to whole CoC
- Plans constantly checked against aim



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(Insert video  
mandraulically)



# MAINTENANCE OF MORALE

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- Created by inspired leadership
- Shared sense of purpose & values
- Perceptions of worth and group cohesion
- Needed throughout whole CoC





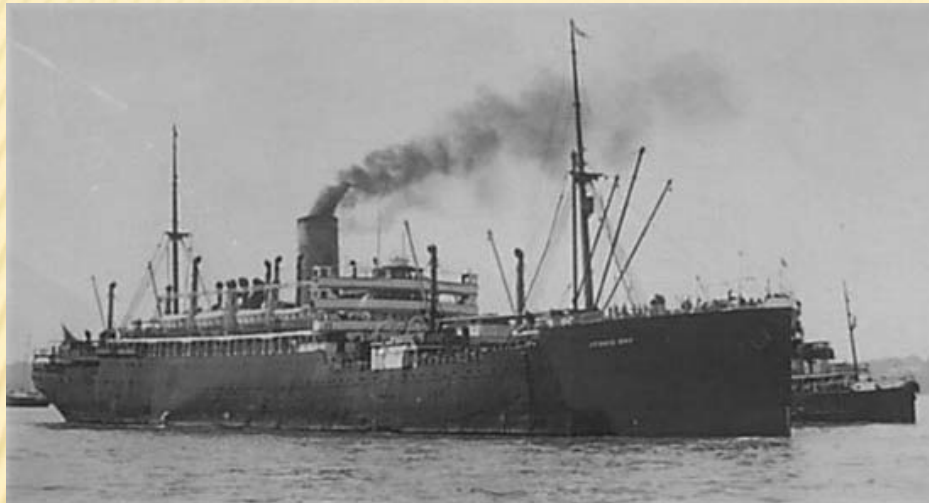


# OFFENSIVE ACTION

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- Freedom to compel the situation
- Seek advantage
- Sustain momentum & initiative
- Exploit opportunities





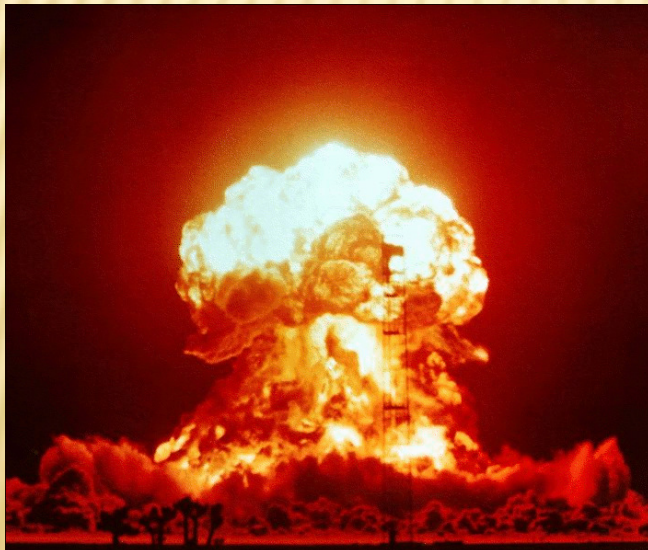


# SECURITY

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- Provision of free ops environment
- Optimisation of Risk
- Protect high value assets & activities
- NOT guarding against every event









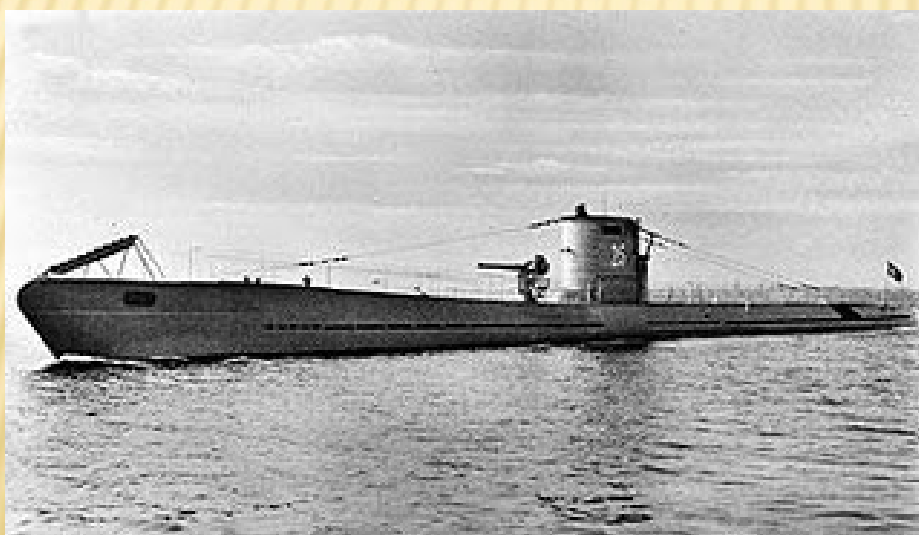
# SURPRISE

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- Deliberate introduction of unexpected
- Secrecy, concealment and deception
- Originality, audacity and temp
- Undermines opponents coherence
- Imposed by:
  - Manoeuvre
  - Novel technology
  - Unfamiliar activities







# CONCENTRATION OF FORCE

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- Decisive application of superior power
- Synchronised and robust
- Aimed to achieve effects
- Can be achieved through:
  - Superior Command & Control
  - Deception
  - Superior Technology
  - Operational Control



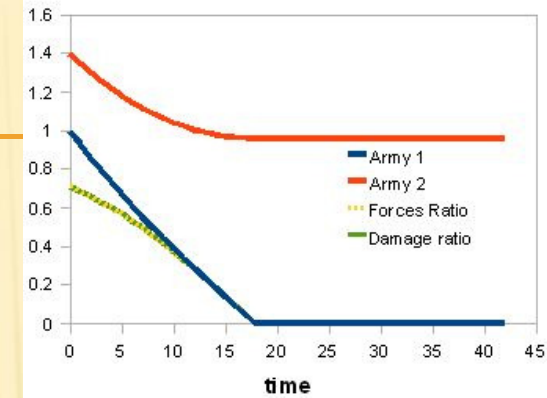


Frederick Lanchester

$$(Power_1 / Power_2)^2$$

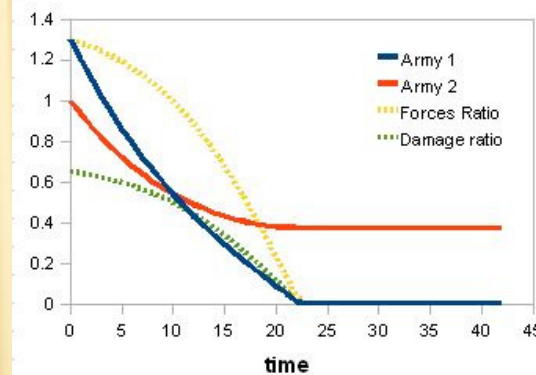
### Win by outnumber

units: 1:1.4 damage rate per unit: 1:1



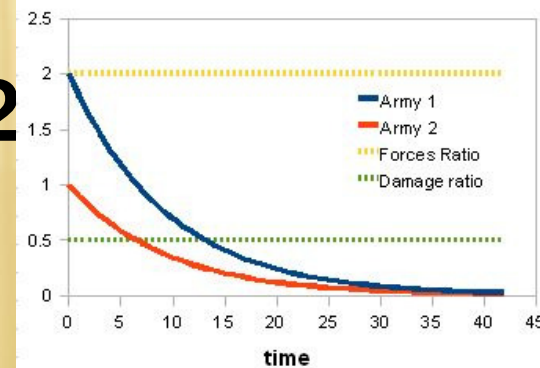
### Win by advantage

units: 1.3:1 damage-rate per unit: 1:2



### Draw: advantage compensate number

units: 1:2 damage rate per unit: 4:1





# ECONOMY OF EFFORT

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- Judicious exploitation of resources
- Aimed at achieving objectives
- Requires relative prioritisation
- Improves sustainability of demands
- Relies on:
  - Right Tools
  - Right Plan
  - Right Time
  - Right Effort















# FLEXIBILITY

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- Ability to meet changing circumstances
- Comprises:
  - Agility – Physical
  - Responsiveness – Structural
  - Resilience – Remaining effective
  - Acuity – Sharpness of thought



# SUSTAINABILITY

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- Generate and sustain freedom of action
- Comprises:
  - Personnel
  - Equipment & Materiel
  - Supplies & Support
- Deciding factor in feasibility of ops





# COOPERATION

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- Teamwork and burden sharing
- Understand/compensate for limitations
- Harmonised goals
- Relies on:
  - Mutual Trust & Goodwill
  - Common Aim
  - Clear division of responsibilities





# PRINCIPLES IN IS OPERATIONS

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- Selection & Maintenance of the Aim
- Maintenance of Morale
- Offensive Action
- Security
- Surprise
- Concentration of Force
- Economy of Effort
- Flexibility
- Sustainability
- Cooperation

## **SOME EXAMPLES:**

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# SELECTION & MAINTENANCE OF THE AIM

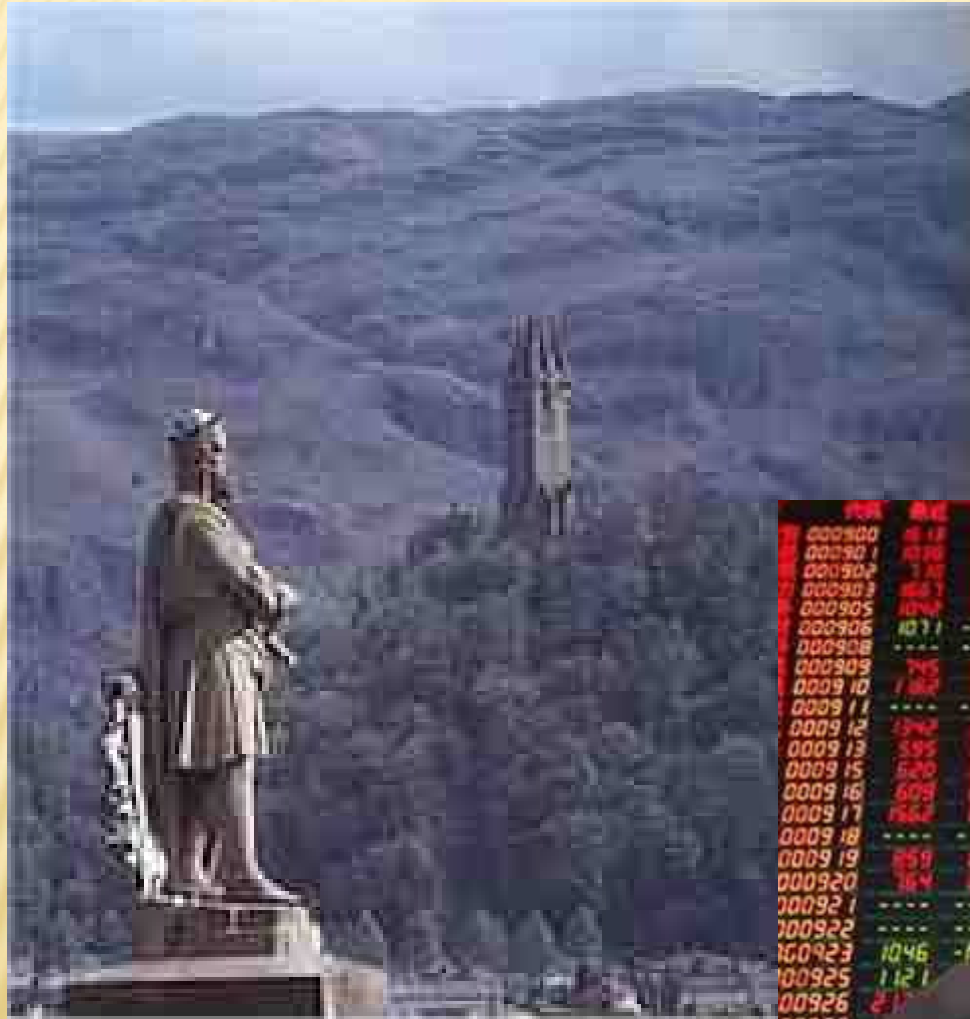




# MAINTENANCE OF MORALE



# OFFENSIVE ACTION



| 代码     | 名称    | 现价   | 涨跌幅   | 成交量    | 开盘价  | 最高价  | 最低价  | 收盘价  | 名称    | 代码     | 现价   | 涨跌幅   | 成交量    |
|--------|-------|------|-------|--------|------|------|------|------|-------|--------|------|-------|--------|
| 000900 | ST 九发 | 1.15 | -0.01 | 206294 | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000920 | 1.15 | -0.01 | 206294 |
| 000901 | ST 九发 | 1.15 | -0.01 | 41305  | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000929 | 1.15 | -0.01 | 206294 |
| 000902 | ST 九发 | 1.15 | -0.01 | 283143 | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000930 | 1.15 | -0.01 | 206294 |
| 000903 | ST 九发 | 1.15 | -0.01 | 35391  | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000931 | 1.15 | -0.01 | 206294 |
| 000905 | ST 九发 | 1.15 | -0.01 | 124023 | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000932 | 1.15 | -0.01 | 206294 |
| 000906 | ST 九发 | 1.15 | -0.01 | 20838  | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000933 | 1.15 | -0.01 | 206294 |
| 000908 | ST 九发 | 1.15 | -0.01 | ---    | ---  | ---  | ---  | ---  | ST 九发 | 000935 | 1.15 | -0.01 | 206294 |
| 000909 | ST 九发 | 1.15 | -0.01 | 77607  | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000936 | 1.15 | -0.01 | 206294 |
| 000910 | ST 九发 | 1.15 | -0.01 | 98119  | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000937 | 1.15 | -0.01 | 206294 |
| 000911 | ST 九发 | 1.15 | -0.01 | ---    | ---  | ---  | ---  | ---  | ST 九发 | 000938 | 1.15 | -0.01 | 206294 |
| 000912 | ST 九发 | 1.15 | -0.01 | 145384 | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000939 | 1.15 | -0.01 | 206294 |
| 000913 | ST 九发 | 1.15 | -0.01 | 111555 | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000940 | 1.15 | -0.01 | 206294 |
| 000915 | ST 九发 | 1.15 | -0.01 | 103498 | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000949 | 1.15 | -0.01 | 206294 |
| 000916 | ST 九发 | 1.15 | -0.01 | 2412   | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000950 | 1.15 | -0.01 | 206294 |
| 000917 | ST 九发 | 1.15 | -0.01 | 14     | 1.16 | 1.15 | 1.14 | 1.15 | ST 九发 | 000951 | 1.15 | -0.01 | 206294 |
| 000918 | ST 九发 | 1.15 | -0.01 | ---    | ---  | ---  | ---  | ---  | ST 九发 | 000952 | 1.15 | -0.01 | 206294 |
| 000919 | ST 九发 | 1.15 | -0.01 | ---    | ---  | ---  | ---  | ---  | ST 九发 | 000953 | 1.15 | -0.01 | 206294 |
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| 000926 | ST 九发 | 1.15 | -0.01 | ---    | ---  | ---  | ---  | ---  | ST 九发 | 000961 | 1.15 | -0.01 | 206294 |
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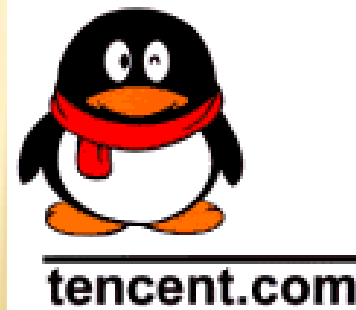
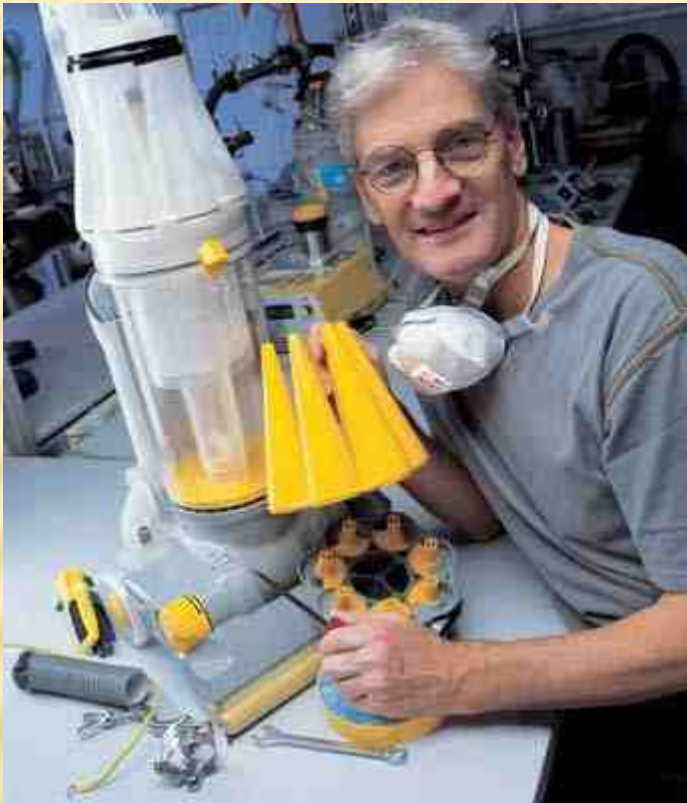
# SECURITY

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# SURPRISE



# CONCENTRATION OF FORCE

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**Canon**  
**XEROX**

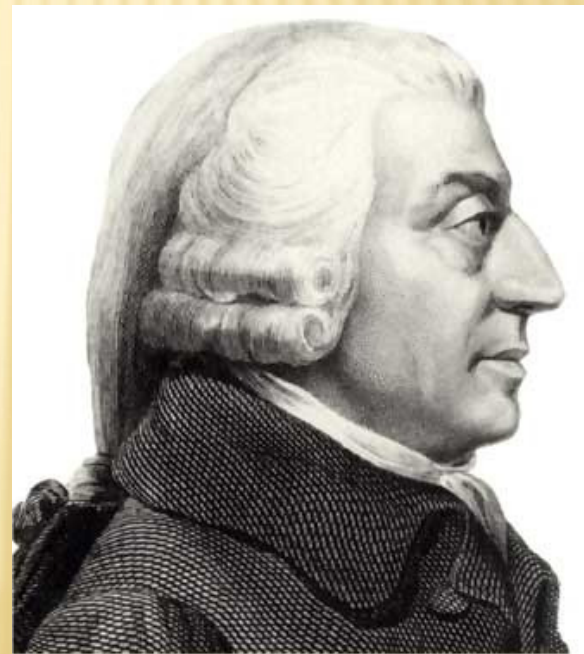
# ECONOMY OF EFFORT

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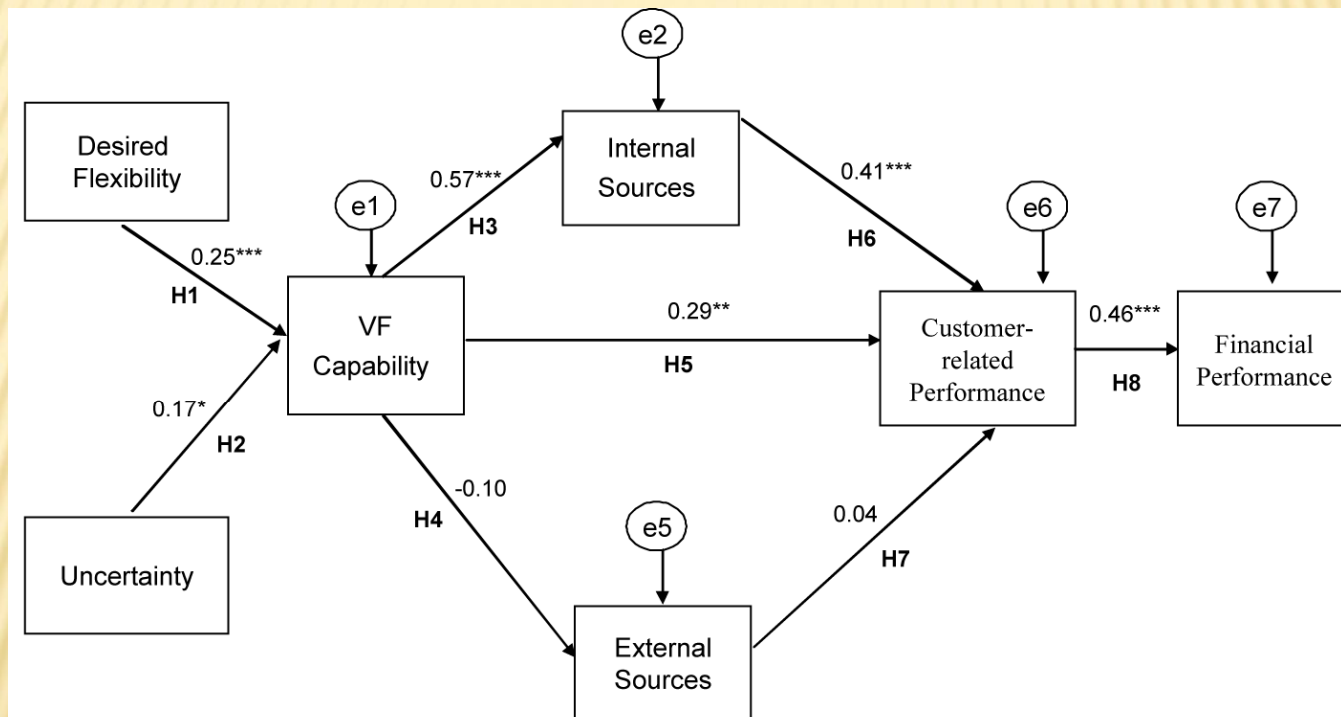




# FLEXIBILITY



# SUSTAINABILITY



Source: Standardized coefficients: \*\*\*significant at the 0.01 level and \*\*significant at the 0.05 level.

**COOPERATION**

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**BCS**

**MEMBER**



**ANY MORE?**

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# QUESTIONS?

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