



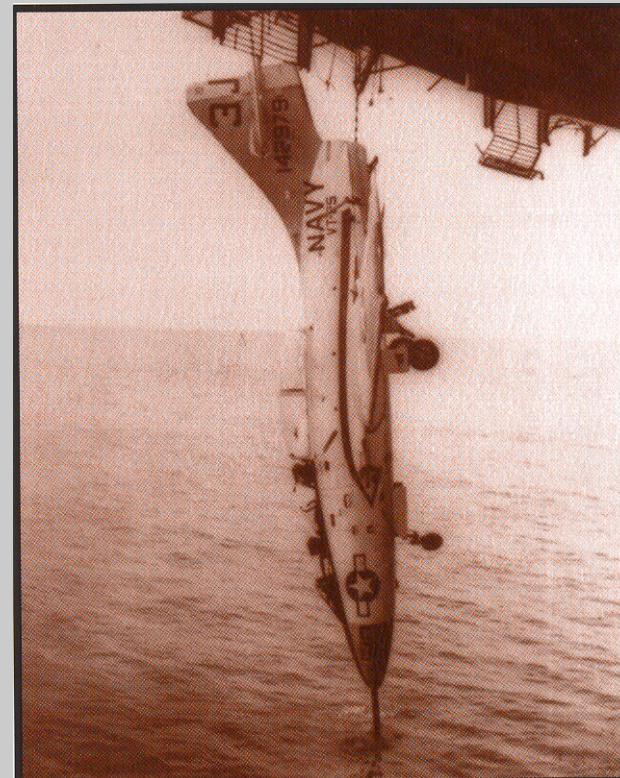
Entscheidungen in komplexen Umgebungen

Jaroslav Blaha

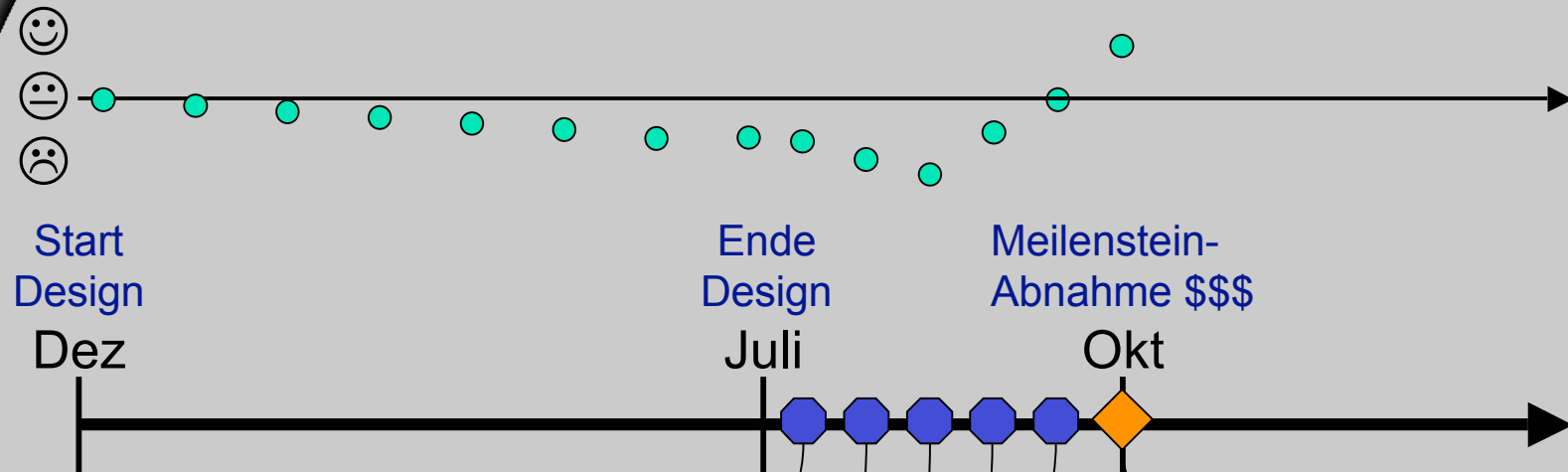
Managing Partner, CTO

COS-Systems GmbH

jbl@cos-systems.com



Eine Geschichte ...



**Design ≈ 11 M€, Budget ≈ 5 M€
... und es war nicht funktionsfähig**

Vorschlag: Alternative
⇒ Evaluationsteam, 4 Manntage
⇒ Nööö - zu aufwendig

Evaluationsteam
⇒ Re-design
≈ 9 M€, Nicht konform

Politischer Prozess

\$\$\$

Wurschteln, Köcheln, Urlaub, PANIK



“Wer sein Leben so einrichtet, daß er niemals auf die Schnauze fallen kann, der kann nur auf dem Bauch kriechen.” Klaus Zwickel

■ **Lehre**

- **Entscheider fürchten Entscheidungen**
 - **Unsicherheit (Unverständnis!)**
 - **Kosten**
 - **Blamage bis zu richtigem Ärger**
- **... denn die Entscheidung ist immer größer als sie aussieht, ...**

“Our enemy is complexity, and our job is to kill it.” Jan Baan

Jede Entscheidung ist in Wahrheit drei-teilig^(*)

Was

① What to change?

Wie

③ How to cause the change?

Wozu

② What to change to?

(*) E. Goldratt, „The Goal“



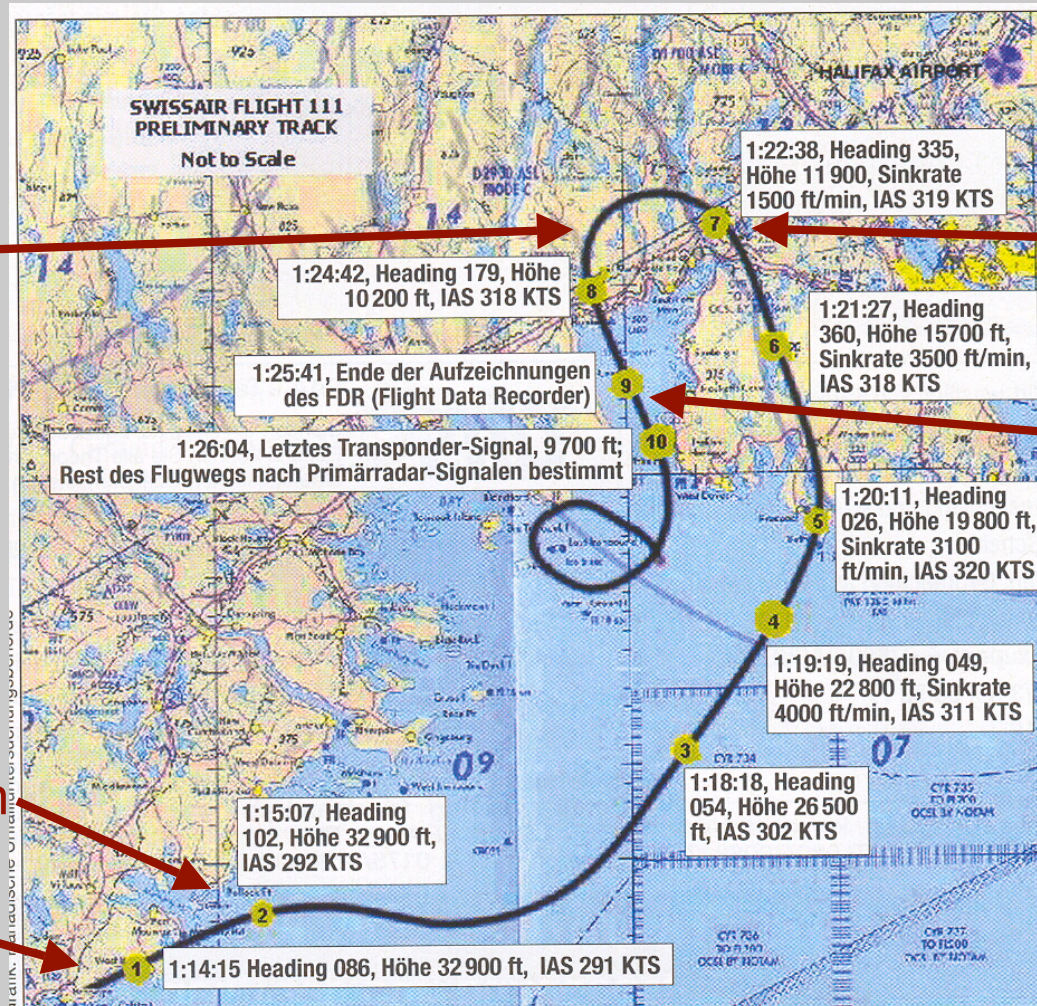
„If you can stay calm, while all around you is chaos; then you probably haven't completely understood the seriousness of the situation.“

- **Standortbestimmung**
 - Hohe Dynamik, fehlende Daten, viele Meinungen
- **Zielbestimmung**
 - Unbestimmt, vage, schlecht vorstellbar
- **Der Weg**
 - Kosten (ROI)
 - Zeitdruck
 - Politik (Anzahl getretene FüÙe)
 - Alternativen



Noch `ne Geschichte

02-Sep-1998, Swissair 111, JFK-Genf



Mayday

Entscheidung
(noch ca. 25 km)

Elektrik-Ausfall

Sauerstoffmasken

Pan Pan Pan

04-Oct-2003

www.cos-systems.com

6/18



“Basic Flying Rules

- 1. Try to stay in the middle of the air.*
- 2. Do not go near the edges of it.*
- 3. The edges of the air can be recognized by the appearance of ground, buildings, sea, trees and interstellar space. It is much more difficult to fly there.”*

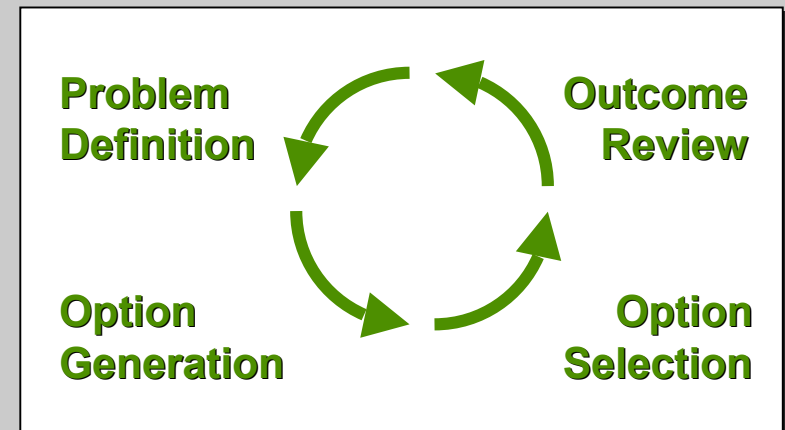
NASA Research - Guidelines

- 1. Fly the aircraft**
- 2. Establish priorities**
- 3. Test assumptions**
- 4. Ask the right questions**
- 5. Clearly state your plan or intentions**
- 6. Practice active listening**
- 7. Delegate tasks & monitor fellow crewmembers**
- 8. Maintain situational awareness**
- 9. Do not accept „killer“ norms**
- 10. Be assertive**

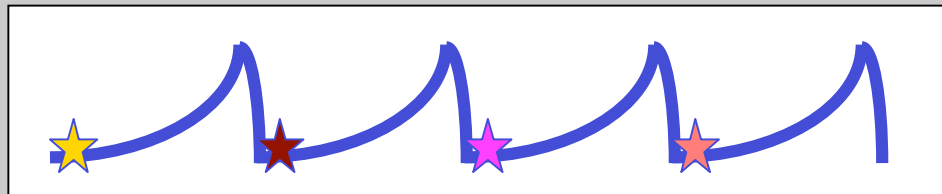
*“Good judgement comes from experience and
experience comes from bad judgement.”*

Frederick P. Brooks

- Die graue Theorie, z.B.
 - Problem
 - Objectives
 - Alternatives
 - Consequences
 - Tradeoffs



➤ Akademisch blütenweiß, doch ...



Theorie of Constraints^(*)

- Primäres Ziel (The Goal)
- Primäre Einschränkung (The Constraint)

1. **Identify** the goal
2. **Identify** the system's constraint(s)
3. **Decide** how to exploit the constraint(s)
4. **Subordinate** everything else to the above decision
5. **Elevate** the constraint



Eine hab' ich noch ...

REUTERS



NEWS AND FINANCIAL INTELLIGENCE FROM THE WORLD LEADER

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ThalesRaytheonSystems cleared to make NATO network

Thu July 31, 2003 04:50 PM ET

By Chelsea Emery

NEW YORK, July 31 (Reuters) -ThalesRaytheonSystems, a partnership between U.S. defense contractor Raytheon Co. and France's Thales, is expected to say on Friday it has been cleared to develop a new \$7.7 billion NATO communications network to replace the hodgepodge of systems now in use.

The joint venture between Raytheon RTN.N and Thales SA TCFP.PA passed a critical design review, allowing it create a standardized network for NATO members, according to a press release obtained by Reuters before the announcement.

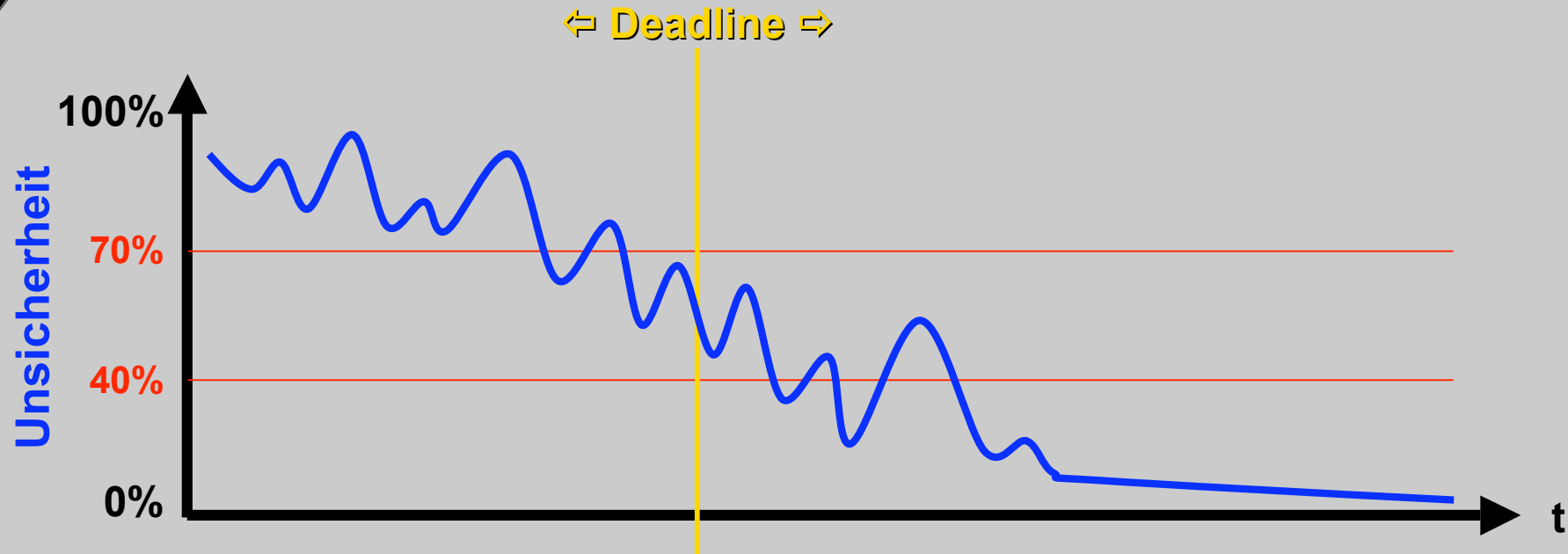
„Indecision is the key to flexibility.“

- **Lehren**
- **Vorbereitung**
 - Maximale Vorab-Koordination
 - Kommunikationslisten
 - Netzwerk aufbauen - Vertrauen!
 - „Paper-trail“ schaffen
- **Lösung**
 - Ruhe bewahren, Ruhe bewahren, ...
 - Kommunizieren, Informieren, Rat suchen
 - „Mit der Entscheidung warten, bis man das Weiße im Auge des Problems sieht“



„Der Irrtum strömt, die Wahrheit sickert.“

„Probability of Success \approx [40%, 70%] Information“



Informationssammlung

Entscheidungsfenster

Bürokratenparadies

*„Rome did not create a great empire by having meetings;
they did it by killing all those who opposed them.“*

- **Instinktiv/Intuitiv wirkungsvolle Manager** (*)
 - *„Sie fällen Entscheidungen rasch und selbstbewusst.*
 - *Sie greifen nur auf Daten zurück, wenn dies erforderlich ist.*
 - *Sie betrachten Intuition als festen Bestandteil des Managementinstrumentariums.“*

- **Entscheidung ohne Rückgriff auf logische/rationale Methoden** 23,4%
- **Integration früherer Erfahrung; Verarbeitung gesammelter Information** 16,8%



“The best executive is the one who has sense enough to pick good men to do what he wants done, and self-restraint enough to keep from meddling with them while they do it.”

Theodore Roosevelt

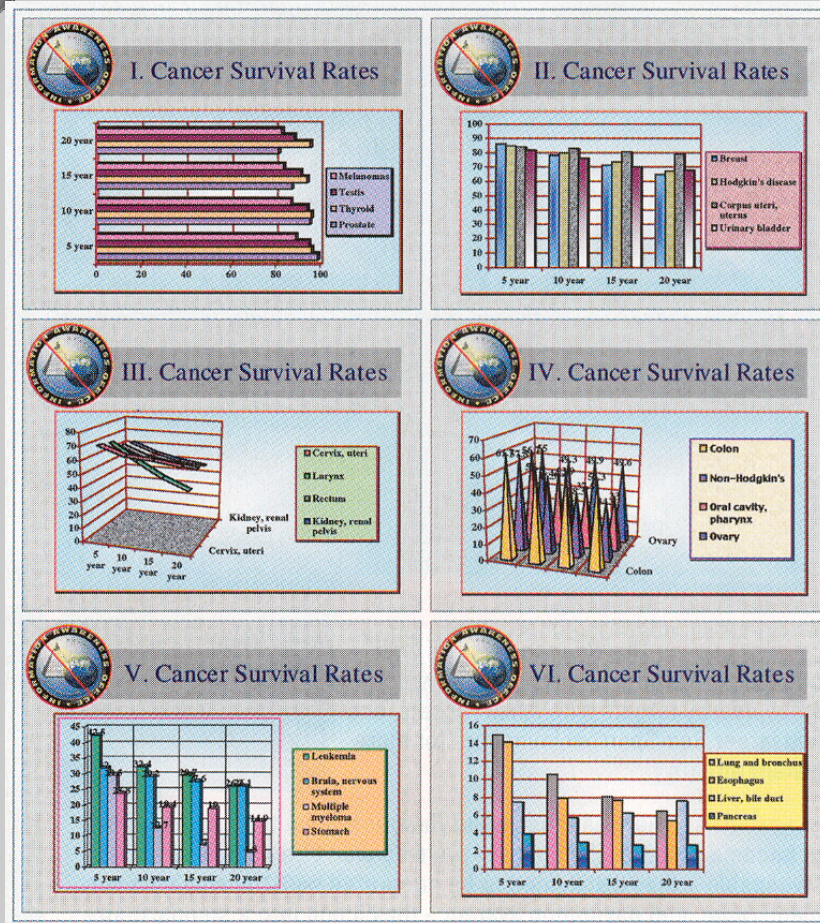
■ Der wahre Entscheider ...?

≤ 300 S.	Militärisch
	<ul style="list-style-type: none">• Lage• Auftrag• Durchführung• Kommunikation• Sanitätswesen

≤ 2 S.	Jaro's Version
	<ul style="list-style-type: none">☺ Präambel• Situation• Problem• Optionen (inkl. Risiken & Bewertung)• Empfehlung (inkl. Plan B.)

„Vermeidet alles, was dem großen Haufen gefällt“

Lucius Annaeus Seneca



Estimates of relative rates, by cancer site

% survival rates and standard errors

	5 year	10 year	15 year	20 year
Prostate	98.8 0.4	95.2 0.9	87.1 1.7	81.3 3.0
Thyroid	96.0 0.8	95.8 1.2	94.0 1.6	95.4 2.1
Testis	94.7 1.1	94.0 1.3	91.1 1.8	88.2 2.3
Melanomas	89.0 0.8	86.7 1.1	83.5 1.5	82.8 1.9
Breast	86.4 0.4	78.3 0.6	71.3 0.7	65.0 1.0
Hodgkin's disease	85.1 1.7	79.8 2.0	73.8 2.4	67.1 2.8
Corpus uteri, uterus	84.3 1.0	83.2 1.3	80.8 1.7	79.2 2.0
Urinary, bladder	82.1 1.0	76.2 1.4	70.3 1.9	67.9 2.4
Cervix, uteri	70.5 1.6	64.1 1.8	62.8 2.1	60.0 2.4
Larynx	68.8 2.1	56.7 2.5	45.8 2.8	37.8 3.1
Rectum	62.6 1.2	55.2 1.4	51.8 1.8	49.2 2.3
Kidney, renal pelvis	61.8 1.3	54.4 1.6	49.8 2.0	47.3 2.6
Colon	61.7 0.8	55.4 1.0	53.9 1.2	52.3 1.6
Non-Hodgkin's	57.8 1.0	46.3 1.2	38.3 1.4	34.3 1.7
Oral cavity, pharynx	56.7 1.3	44.2 1.4	37.5 1.6	33.0 1.8
Ovary	55.0 1.3	49.3 1.6	49.9 1.9	49.6 2.4
Leukemia	42.5 1.2	32.4 1.3	29.7 1.5	26.2 1.7
Brain, nervous system	32.0 1.4	29.2 1.5	27.6 1.6	26.1 1.9
Multiple myeloma	29.5 1.6	12.7 1.5	7.0 1.3	4.8 1.5
Stomach	23.8 1.3	19.4 1.4	19.0 1.7	14.9 1.9
Lung and bronchus	15.0 0.4	10.6 0.4	8.1 0.4	6.5 0.4
Esophagus	14.2 1.4	7.9 1.3	7.7 1.6	5.4 2.0
Liver, bile duct	7.5 1.1	5.8 1.2	6.3 1.5	7.6 2.0
Pancreas	4.0 0.5	3.0 1.5	2.7 0.6	2.7 0.8



“Technology is dominated by two types of people: those who understand what they do not manage, and those who manage what they do not understand”

1. Introduction

This memo is a summary about a number of various topics that appear to be either not clear not addressed by common consensus, or not taken in account, as of today

As a result, most of these topics might lead to significant problems from the ADP Infrastructure BaseLine, when integration time will come.

From recent experiments in the Telecommunications industry having similar needs, it appears that nowadays Solaris Unix scheduler sophistication does better in practically all cases than a "manually" controlled scheduler.

From the standard features in Unix Solaris, the LDAP Directory can be secured using Kerberos layers, and stored into an NFS storage place itself secured.
This shows that such a "native" infrastructure could meet others layers such as those from e-Trust in SCM which also needs a repository.

- Voice synchronization,
 - May be seen with VCF separately time stamped, then post-synchronized when replaying, see : NICE or JMF / Java Media Framework
 - May be an already mixed stereo line out from the VCF to the Audio input from the WorkStation, Sampling/time coding the voices into an MP3 or equivalent format, storing it by chunks with X-event files. Can be done with Java Media Framework

By now, These are the identified risks from an Architectural Design point of view, I will be pleased to discuss those with you from the 15th. August 2002, or if there are some planes have been settled to avoid these risks or some adjustments from the ADP needed.



„Wer spricht von Siegen? Überstehn ist alles.“

Rilke

- **Strategische Leitlinie**
 - **Klar, konsistent, unerschütterlich**
 - **Wohl kommuniziert**
 - **Live another day - Fight another day.**
 - **Don't sweat the small stuff : **Triage****



We need managers, not MBAs

★ EUROPE ★
FINANCIAL TIMES

Tuesday September 16 2003

***„Leadership is the art of
accomplishing more than the
science of management says
is possible.“***

Colin Powell