



BRIDGES

TO HIGHER EDUCATION

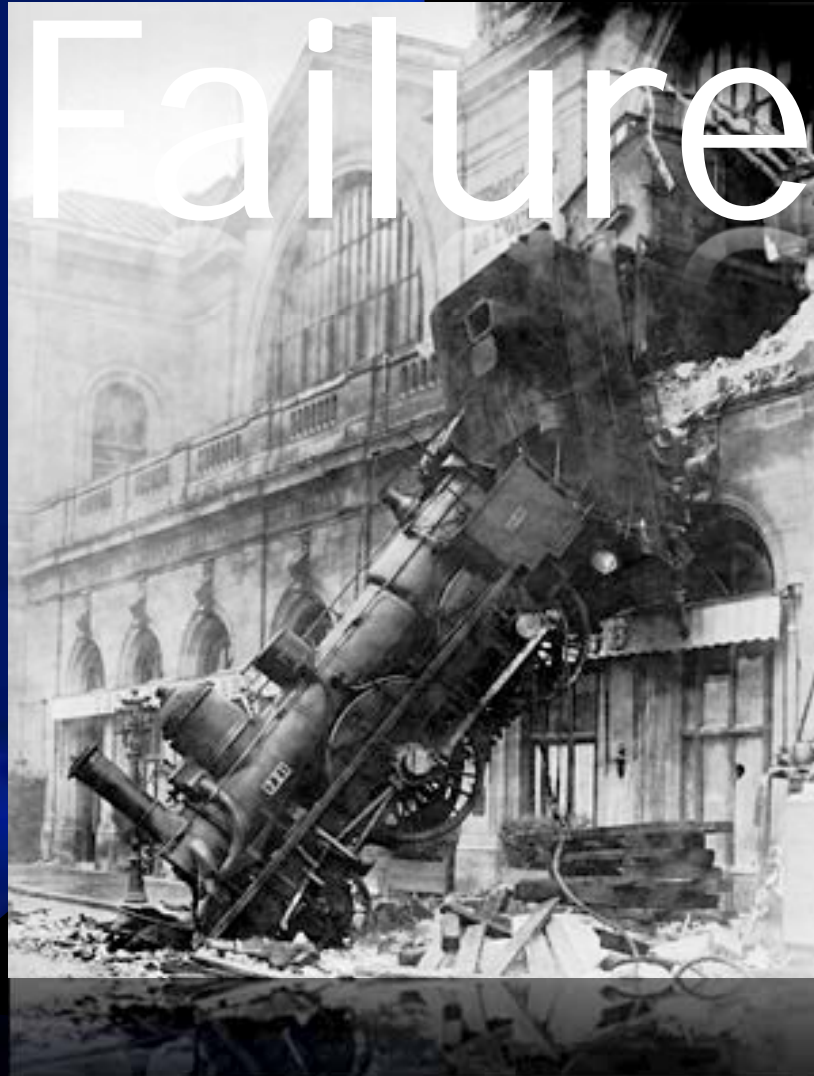
The importance of failure

A.Prof. Jonathon Allen, Director of Academic Program - Design,

University of Western Sydney



The importance of Failure



Innovation



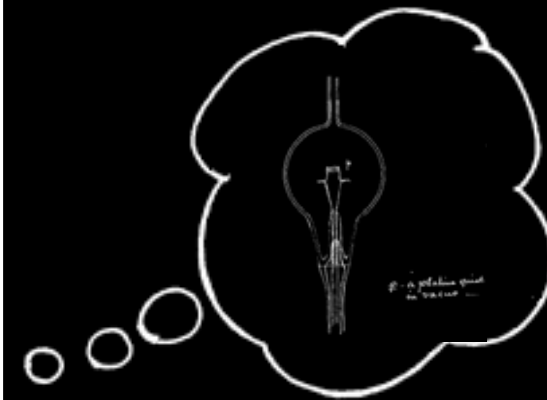
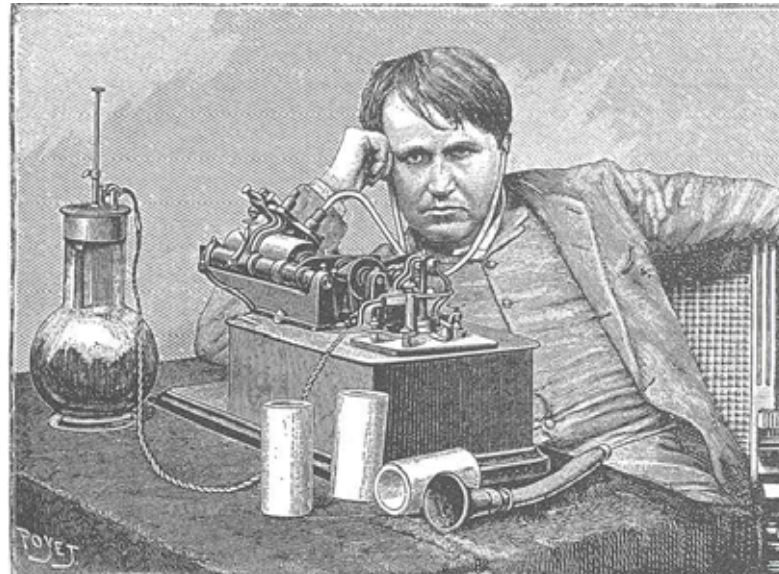
Innovation

Ideation Imagine, conceive; form ideas
3rd most prolific inventor - 1,093 patents

World's biggest failure?

More failures recorded than anyone.

Over 3 million pages in his journals recording his experiments and design 'failures' and 'successes'.



Thomas Edison



Innovation

Kia Silverbrook

4,097 US patents

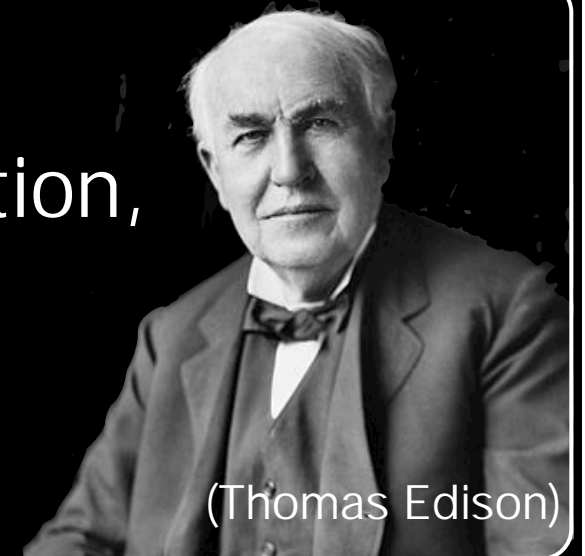
9,042 International patents

Most prolific inventor in the world



The importance of trying...

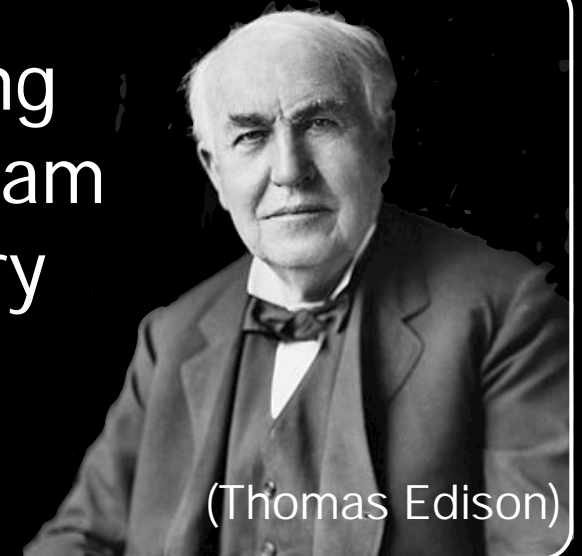
Genius is 1 percent inspiration,
99 percent perspiration



(Thomas Edison)

The importance of trying...

If I find 10,000 ways something won't work, I haven't failed. I am not discouraged, because every wrong attempt discarded is another step forward.



(Thomas Edison)

The importance of trying...

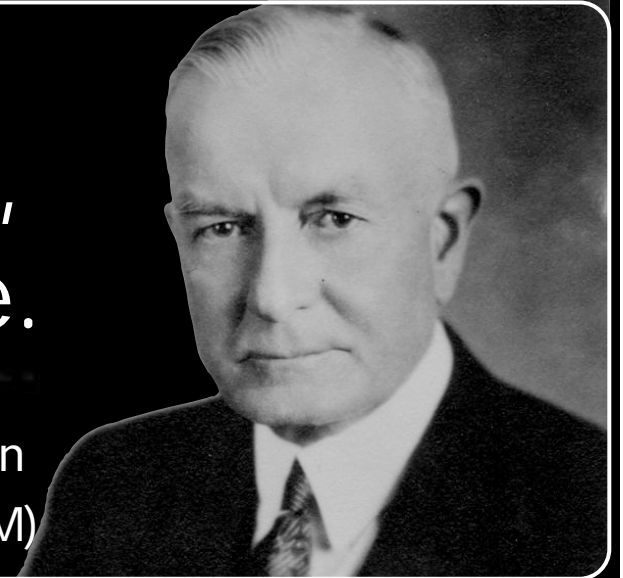
Fail early and
fail often in order
to succeed sooner.

I
D O
E

The importance of valuing trying...

If you want to succeed,
double your failure rate.

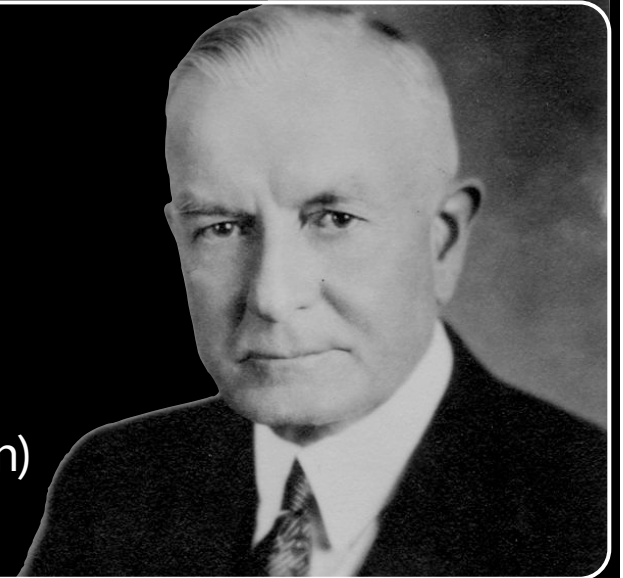
(Thomas J Watson
President IBM)



The famous 1943 alleged statement:

I think there is a world
market for maybe five
computers.

(Thomas J Watson)
(President IBM)

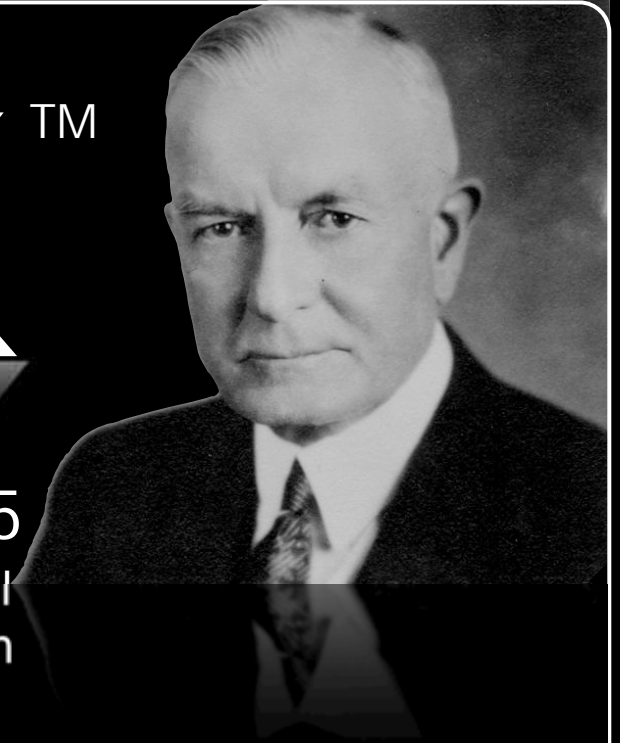


The importance of valuing trying...

THINK™

THINK - trademarked in 1935

"this word is on the most conspicuous wall
of every room in every IBM building. Each
employee carries a THINK notebook in
which to record inspirations"



The importance of backing yourself ...

RSA STUDENT DESIGN AWARDS

Public Fax Machine

Sponsored by Pitney Bowes

Making use of CT2 technology and the use of the ISDN system, this fax machine permits its users to send and receive faxes anywhere in the world by inserting their personal *CardFax* card. This received a High Commendation in the Communications and Information Technology Sector of the RSA Student Design Awards and was subsequently exhibited in London's Design Museum and at various sites in the UK on a touring exhibition.



The importance of backing yourself ...

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my idea:

- pressed aluminium shell
- papier mache covering

the winner:

- pressed aluminium shell
- papier mache covering

lecturer said:

no - unproven ...
go with injection
moulded ABS

What I learned:

take risks - don't be afraid of failing
ask for help

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I consider asking for help a
sign not of weakness but of
self-confidence



(Larry Bossidy)

What I learned:

- take risks - don't be afraid of failing
- ask for help
- persevere ... and prove your idea
- don't be so timid
- comfort isn't always a good thing
... get out of your comfort zone
- discover your own limits
... if you don't try, you won't know
- you're responsible for yourself
... others will often help though
- my maxim: so long as I'm learning

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The importance of backing yourself ...

National / Global
X25 Backbone
Network Cloud

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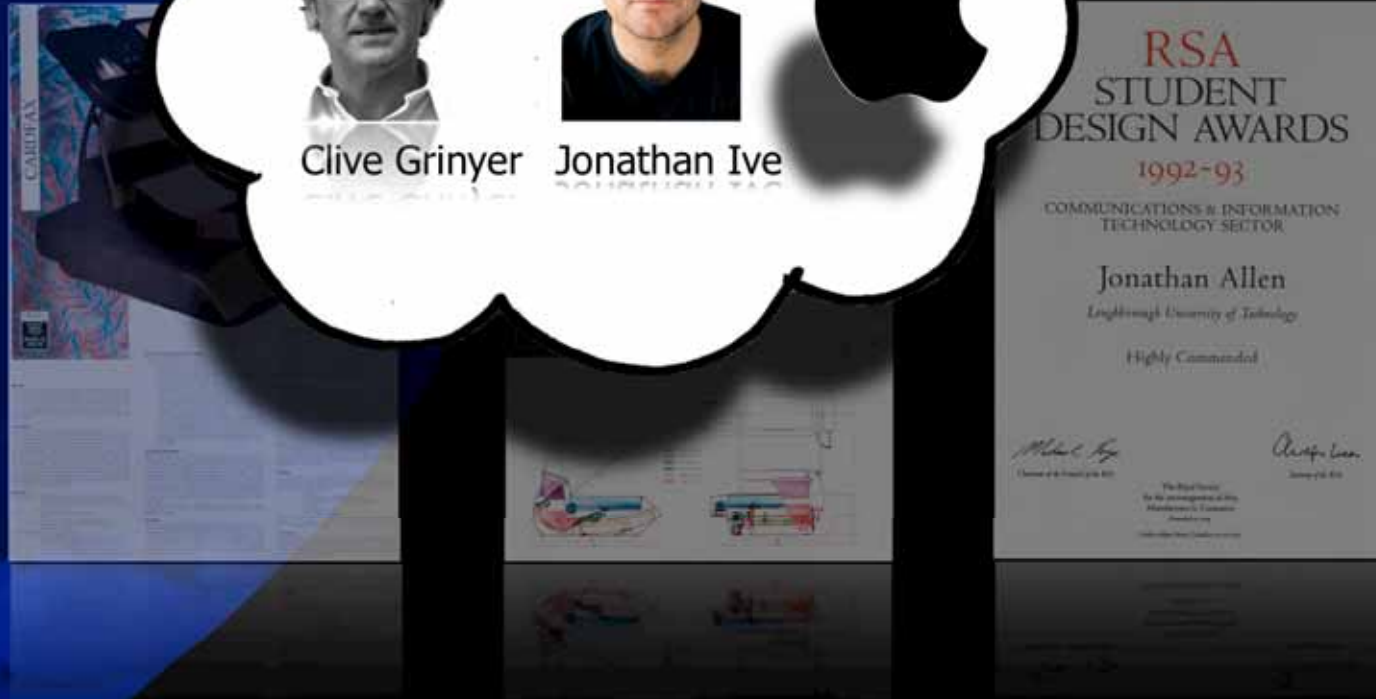
The importance of backing yourself ...

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Clive Grinyer

Jonathan Ive

RSA
STUDENT
DESIGN AWARDS
1992-93

COMMUNICATIONS & INFORMATION
TECHNOLOGY SECTOR

Jonathan Allen

Loughborough University of Technology

Highly Commended

Michael Ayres

Chairman of the RSA Awards Ltd.

Jonathan Allen

January 1994

The Royal Society
for the encouragement of Arts,
Manufactures & Commerce
London

The importance of believing in yourself ...



Jonathan Ive and Steve Jobs

The importance of believing in yourself ...



iCloud



Jonathan Ive and Steve Jobs

The importance of believing in yourself ...



Think different.

From Apple

The importance of believing in yourself ...



From Apple



To NeXT

Innovation

Tim Berners-Lee

Proposed: March 1989

1st success: 25 December 1990

WWW



Innovation Tim Berners-Lee

Proposed: March 1989

1st success: 25 December 1990



There you go, it
seemed like a good
idea at the time

(Tim Berners-Lee)



The importance of believing in yourself ...

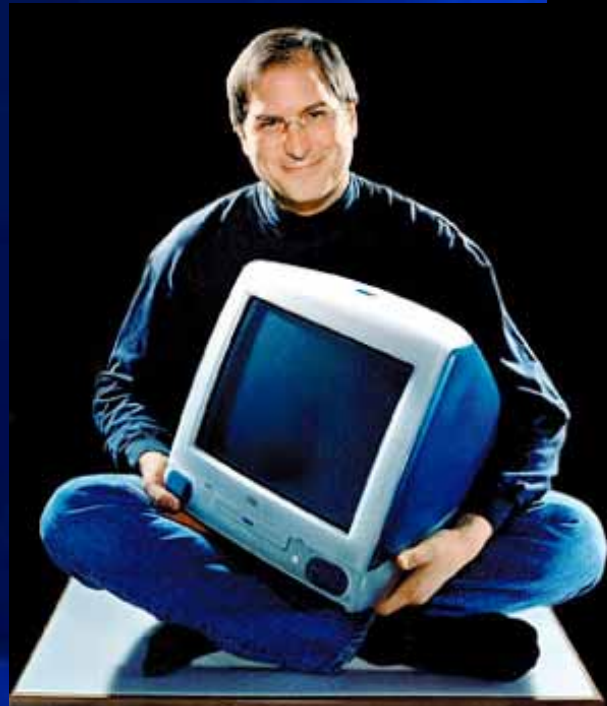


To Pixar

P I X A R



The importance of believing in yourself ...



To Apple again ...

The importance of believing in yourself ...



Innovation



Masaru Ibuka,
Co-Founder of Sony

Nothing is more important
or beneficial for individuals
or organizations than
screwing up



(Tom Peters)

The importance of imagination



Ole Kirk Christiansen

lost his job during the
depression ... started
making wooden toys to
make a living

factory burnt down in
1942 - rebuilt ...
1947 - used plastics

leg godt = Danish for play well
lego = 'I put together' in Latin

To nurture the child in each of us

The importance of imagination ... and the failure of education



Imagination underpins every uniquely human achievement. **Imagination** led us from caves to cities, from bone clubs to golf clubs, from carrion to cuisine, and from superstition to science

(Ken Robinson)

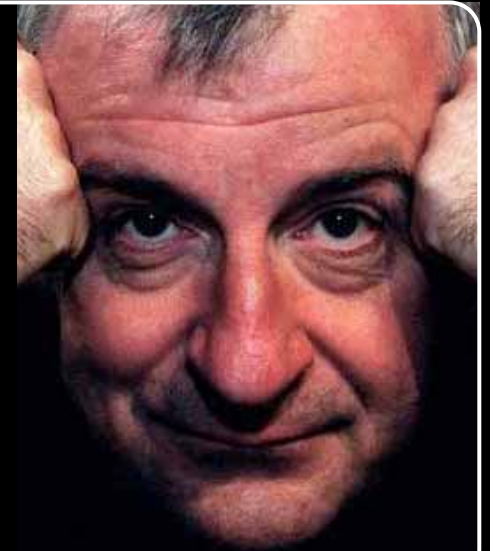


<http://www.youtube.com/watch?v=zDZFcDGpL4U>

The importance of letting go ...

Flying is learning to throw
yourself at the ground
and miss

(Douglas Adams)



The importance of letting go ...



1st Australian Red Bull Flugtag

The importance of observation ...



Leonardo Da Vinci

The importance of learning from mistakes ...



pioneers of early flight

The importance of learning from mistakes ...



Innovation

Learning from mistakes

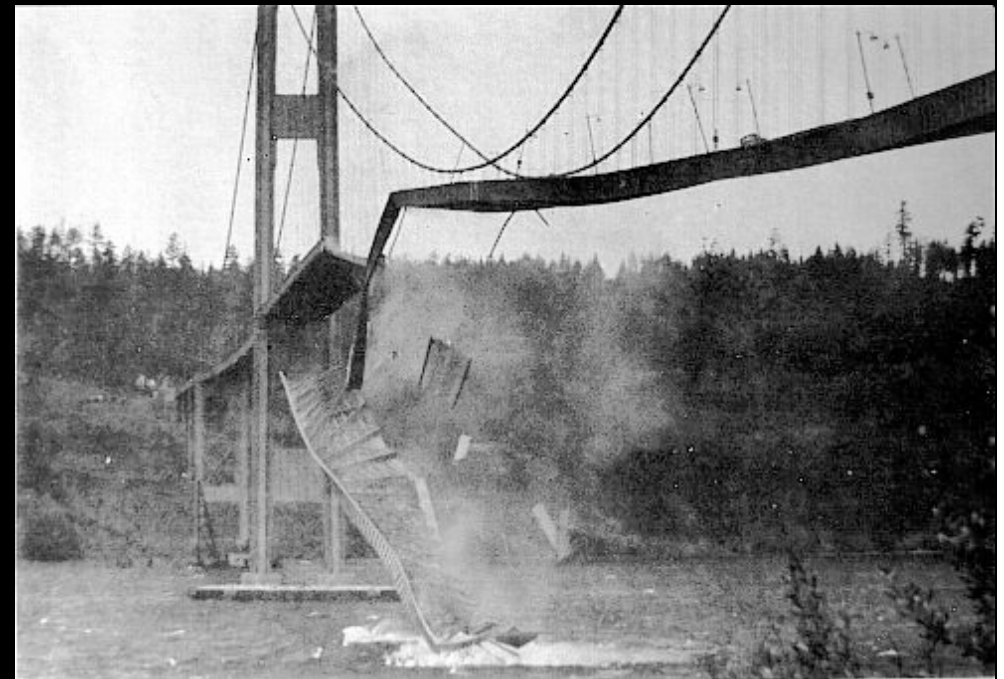


de Havilland DH 106 Comet - first commercial jet liner



Concord - first supersonic commercial jet liner

The importance of learning from mistakes ...



Tacoma Narrows Bridge

<http://www.youtube.com/watch?v=j-zczJXSxnw>

Failure isn't falling down.
It's staying down

(Steve Hogarth)



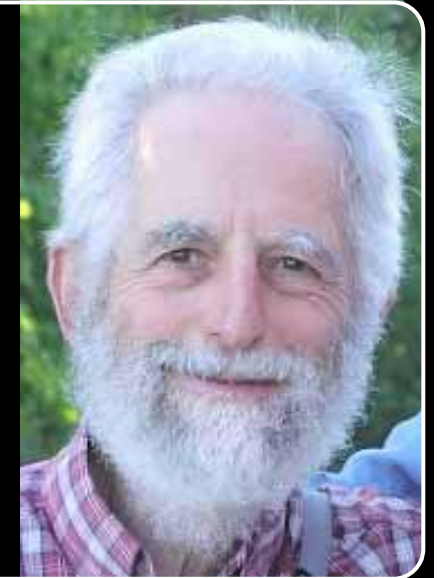
Project SAPPHO

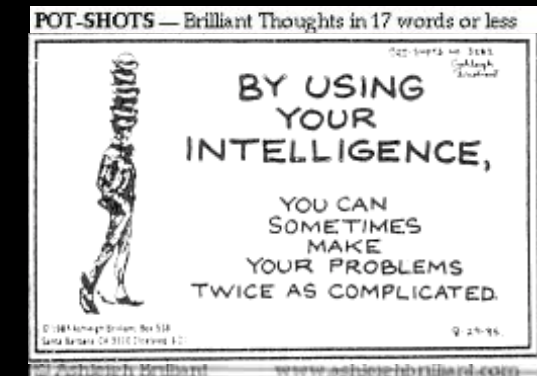
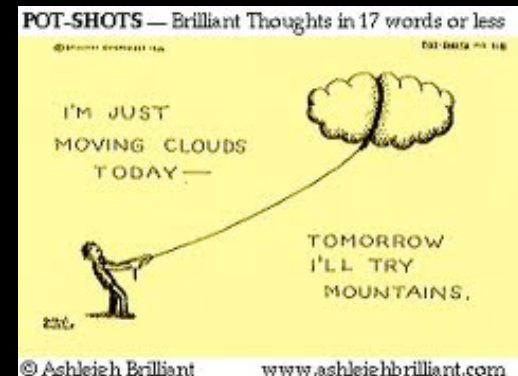
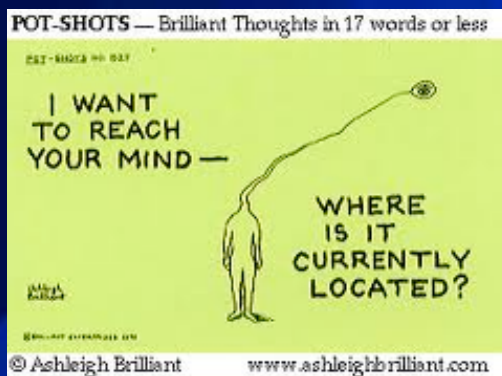
- The responsible individuals in the successes were usually more senior and had more authority (i.e., characteristics of management).
- Successes paid more attention to marketing and publicity.
- Successful innovators had a better understanding of user needs.
- Successes performed development more efficiently (but not necessary more quickly).
- Successes made more use of outside technology and advice (i.e., more communication).

The importance of markets ...

My play was a complete success.
The audience was a failure

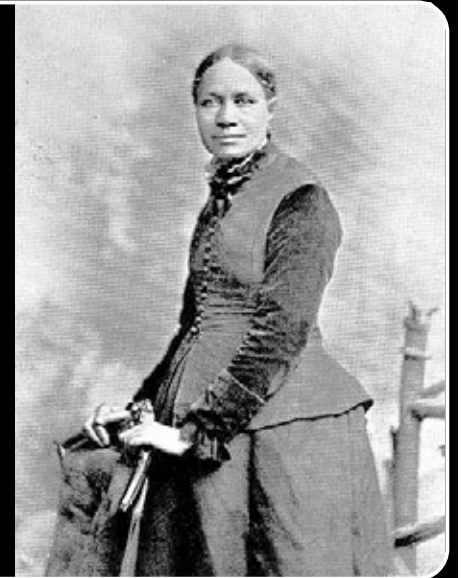
(Ashleigh Brilliant)





Apparent failure may hold in its
rough shell the germs of a success
that will blossom in time, and bear
fruit throughout eternity

(Frances Watkins Harper)



The importance of timing ...



Innovation

- 1968: Chemist, Dr Spencer Silver, develops a low tack adhesive
It took five years of promoting the idea at 3M, before a colleague, Art Fry, thought of using the adhesive to keep his bookmark in his hymnbook
- 1977: 3M launched the product named "Press 'n Peel"
- Dissapointing results
- 1978: 3M gave free samples to people
- 95% said they would buy the product
- 1980: Post-It Notes launched in USA - worldwide in 1981

The importance of timing ...



Innovation

3M

To be the most innovative enterprise in the world

Failure is relative. It's relative to the perspective of the judge. It's relative to time. It's relative to the moment in time - a moment in the process, in the project, in the life - that is arbitrarily frozen and extracted and weighed in the scale of whim

(David Barringer)



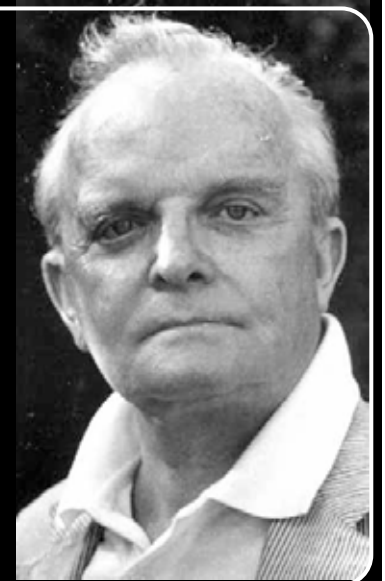
Every exit is
an entry
somewhere
else

(Tom Stoppard)



Failure is the condiment that
gives success its flavor

(Truman Capote)



Thank you

