

Being More Creative



@ShaneFarritor

Professor, Mechanical Engineering, UNL

COAST TO COAST STORES
... total hardware



TOTAL HARDWARE **Coast to Coast**







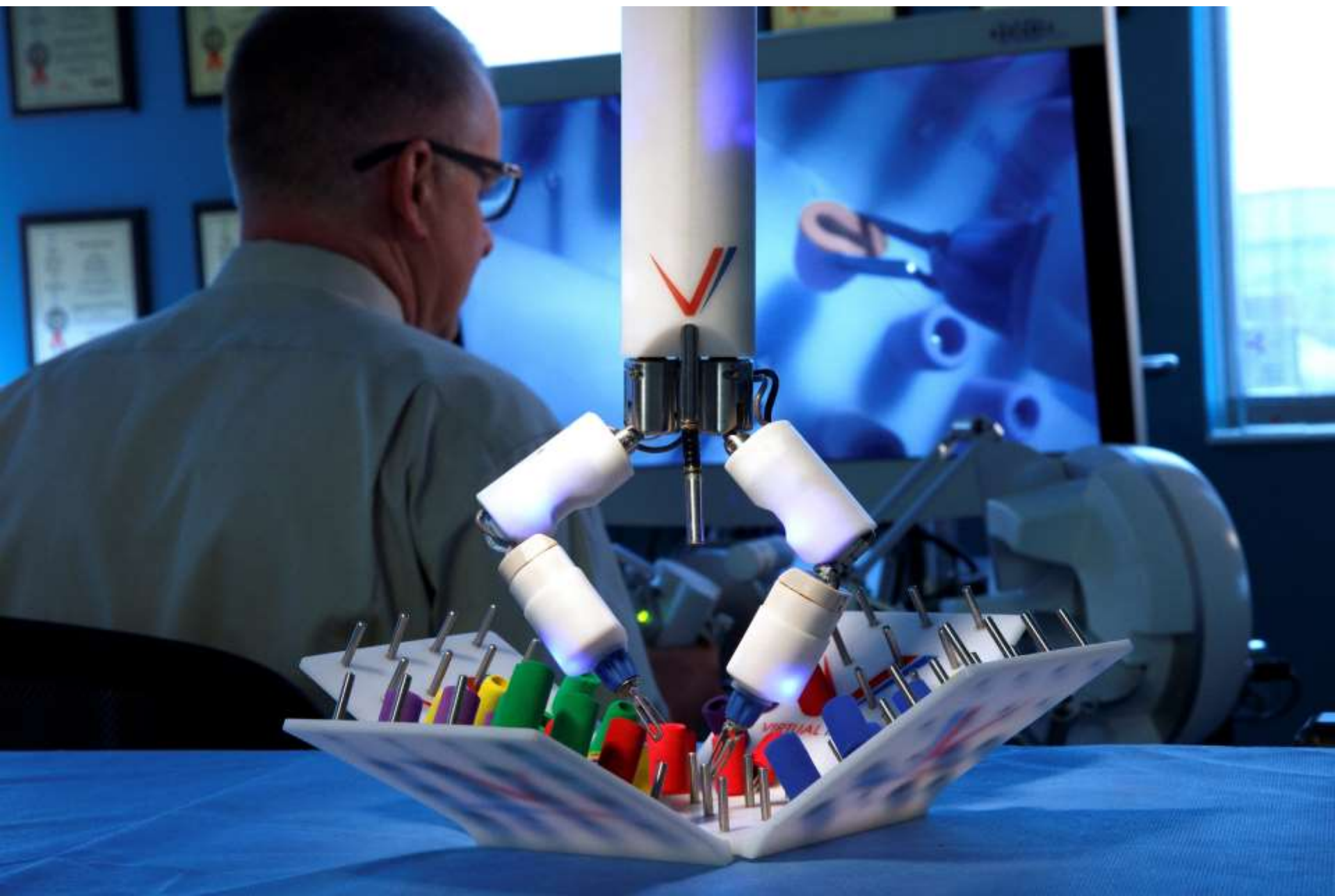
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-97.475816085 W
000:7173.95

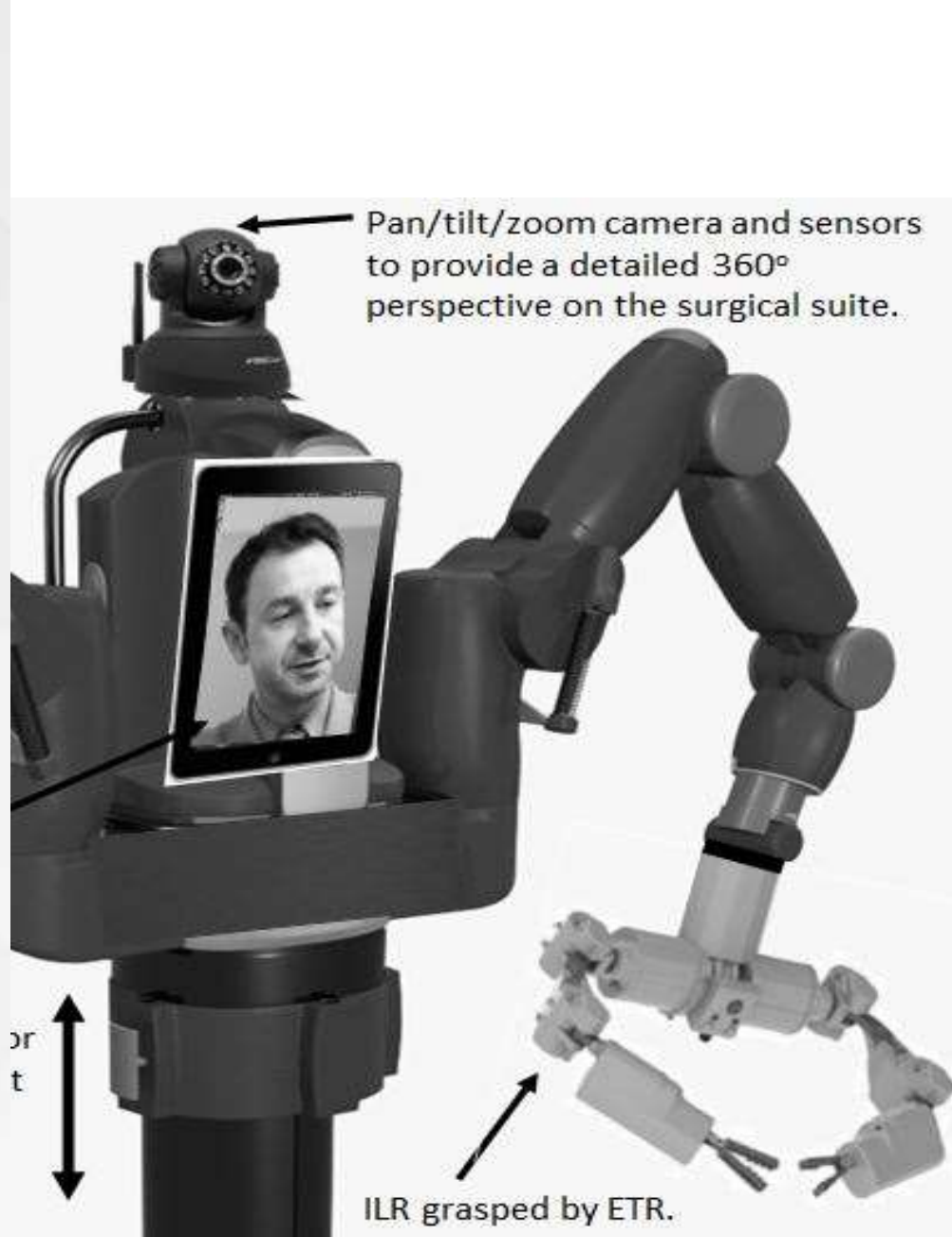
-3756 lbs
18:50:00 02
Vel: 41.2mph

40.256815438 N
-97.475816085 W
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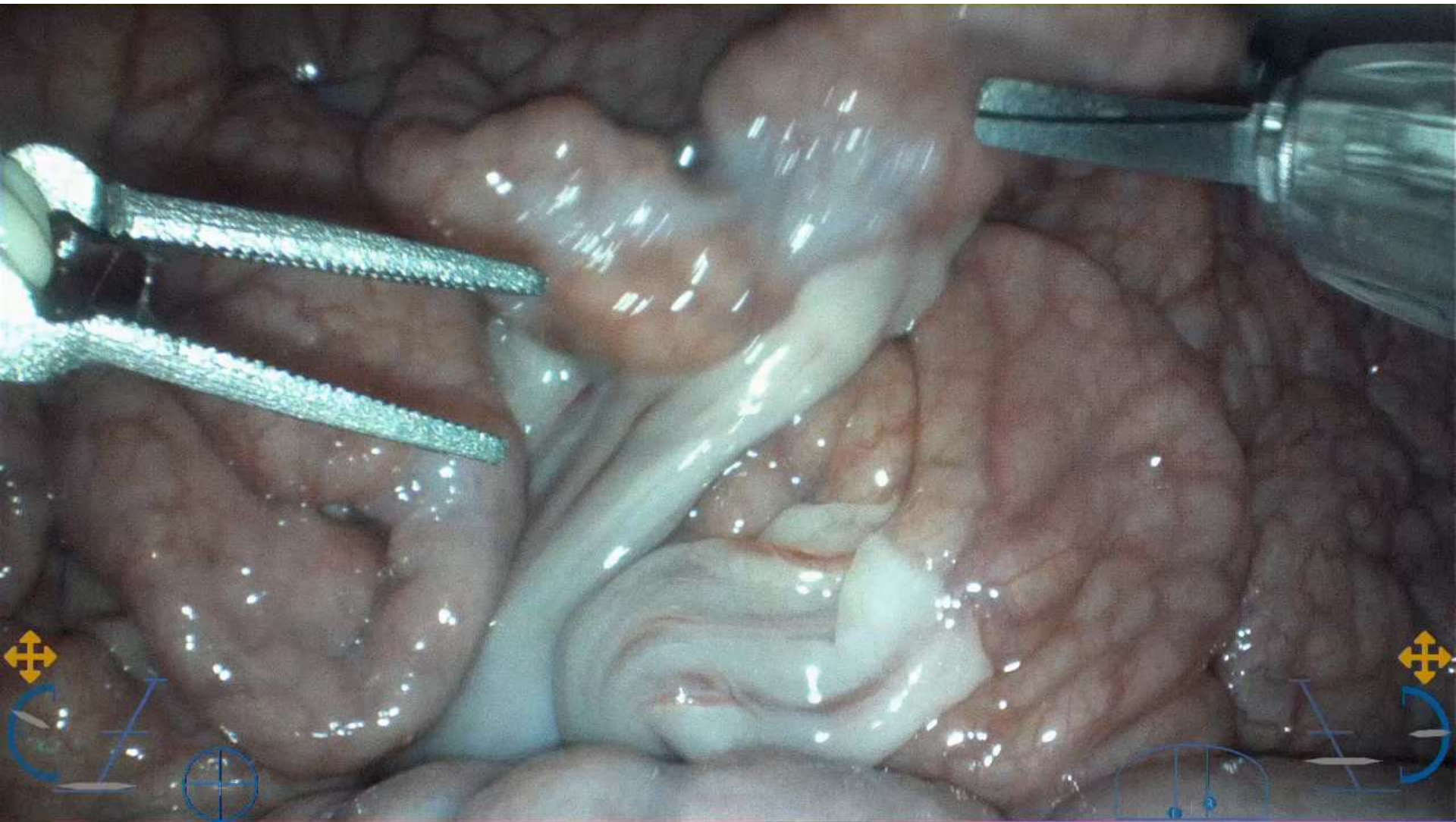


Pan/tilt/zoom camera and sensors to provide a detailed 360° perspective on the surgical suite.

or t

ILR grasped by ETR.





Design

not only function

Story

not only argument

Symphony

not only focus

Empathy

not only logic

Play

Not only seriousness

Meaning

Not only accumulation

A Whole New Mind

Daniel Pink

CAROL S. DWECK, Ph.D.

mindset

THE NEW PSYCHOLOGY OF SUCCESS

HOW WE CAN
LEARN TO FULFILL
OUR POTENTIAL

1.8
MILLION
COPIES
IN PRINT

- *parenting
- *business
- *school
- *relationships

“Through clever research studies and engaging writing, Dweck illuminates how our beliefs about our capabilities exert tremendous influence on how we learn and which paths we take in life.”

—BILL GATES, *GatesNotes*

LINCHPIN

Are You Indispensable?



Bestselling author of *Purple Cow*, *The Dip*, and *Tribes*

SETH GODIN

THE NEW YORK TIMES BESTSELLER

Linchpin

Seth Godin



No to “me too”.





An Employee



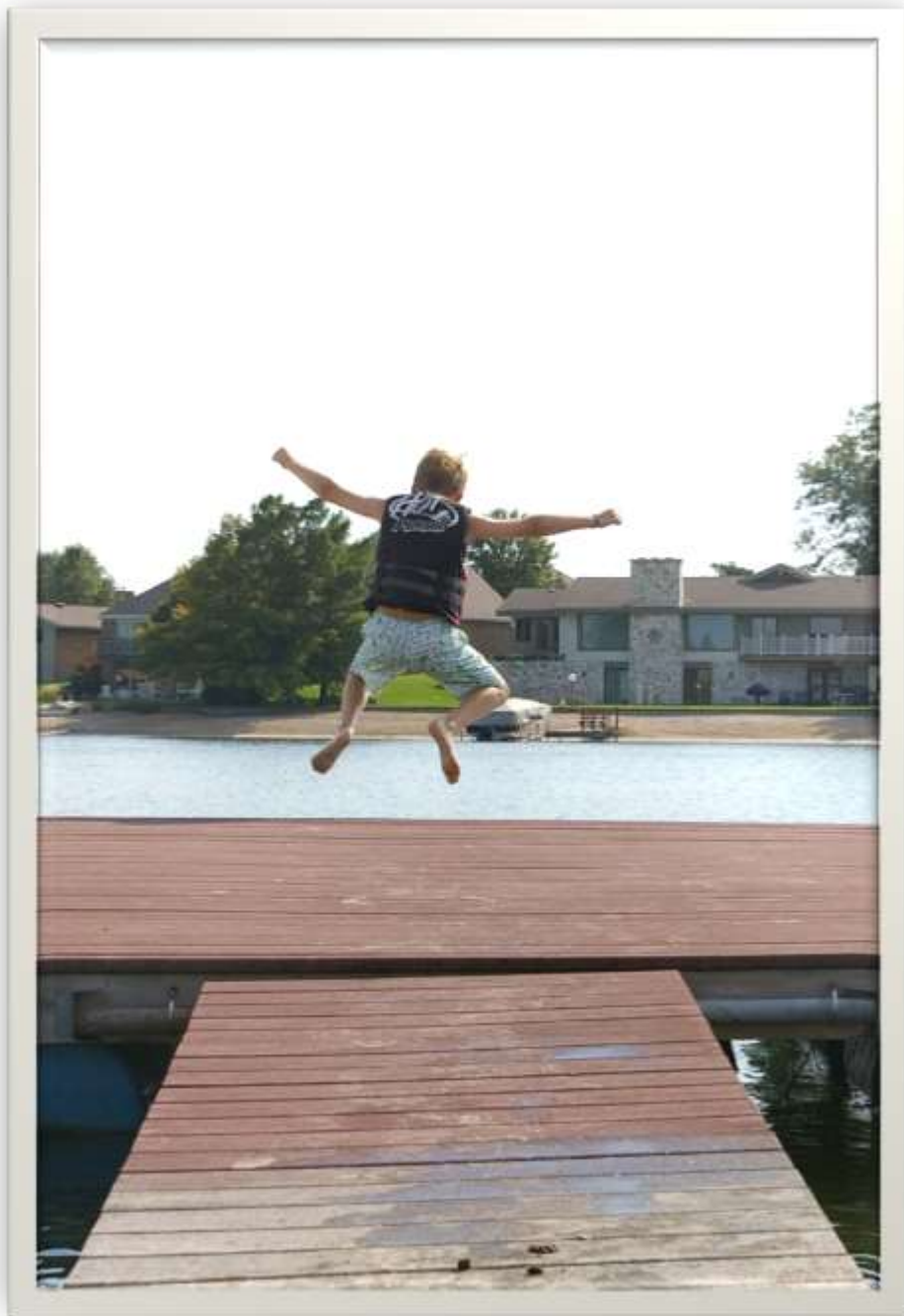
Your Job –
there is a map
this is you're salary

A Linchpin



Your Job –
there is a map

Your Art –
there is no map
this is a gift

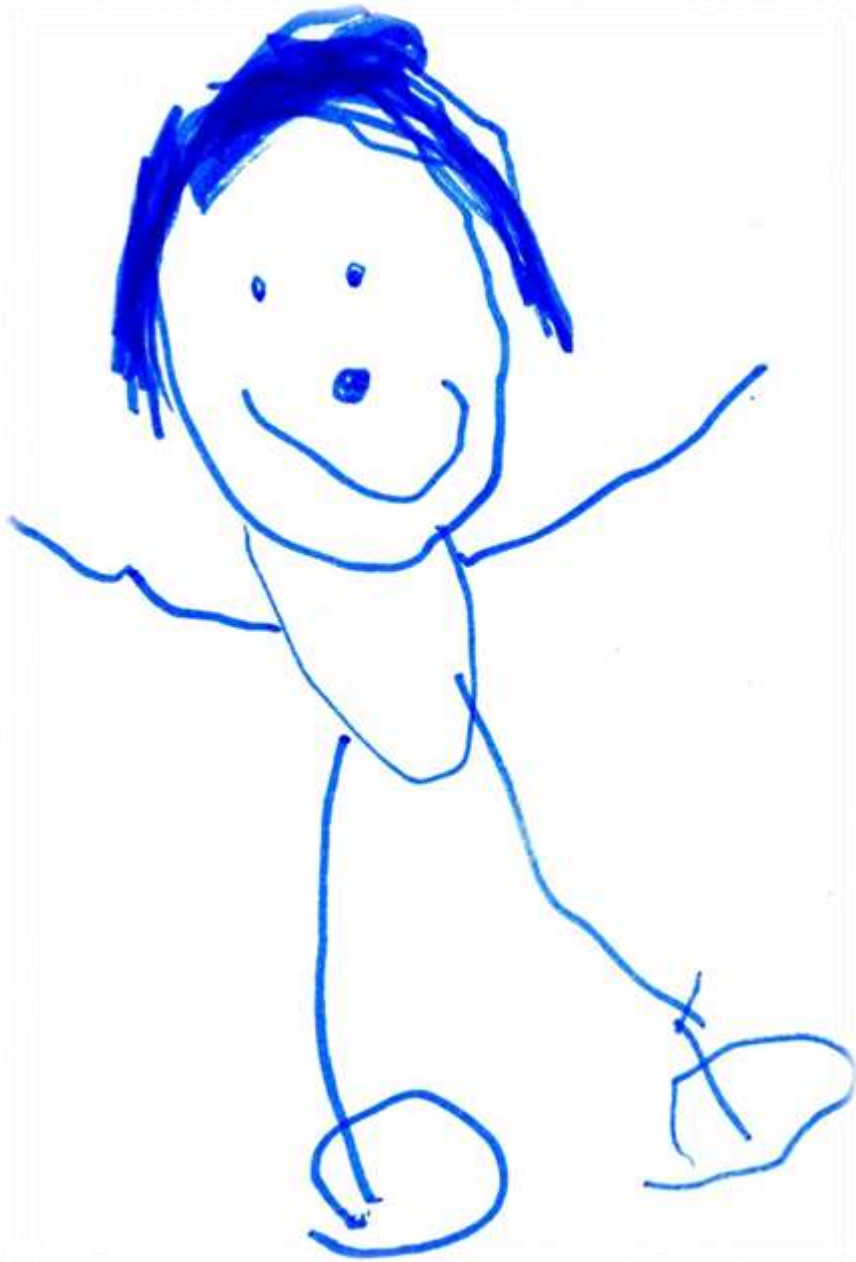


**It is impossible
that you have
no creative gift.**

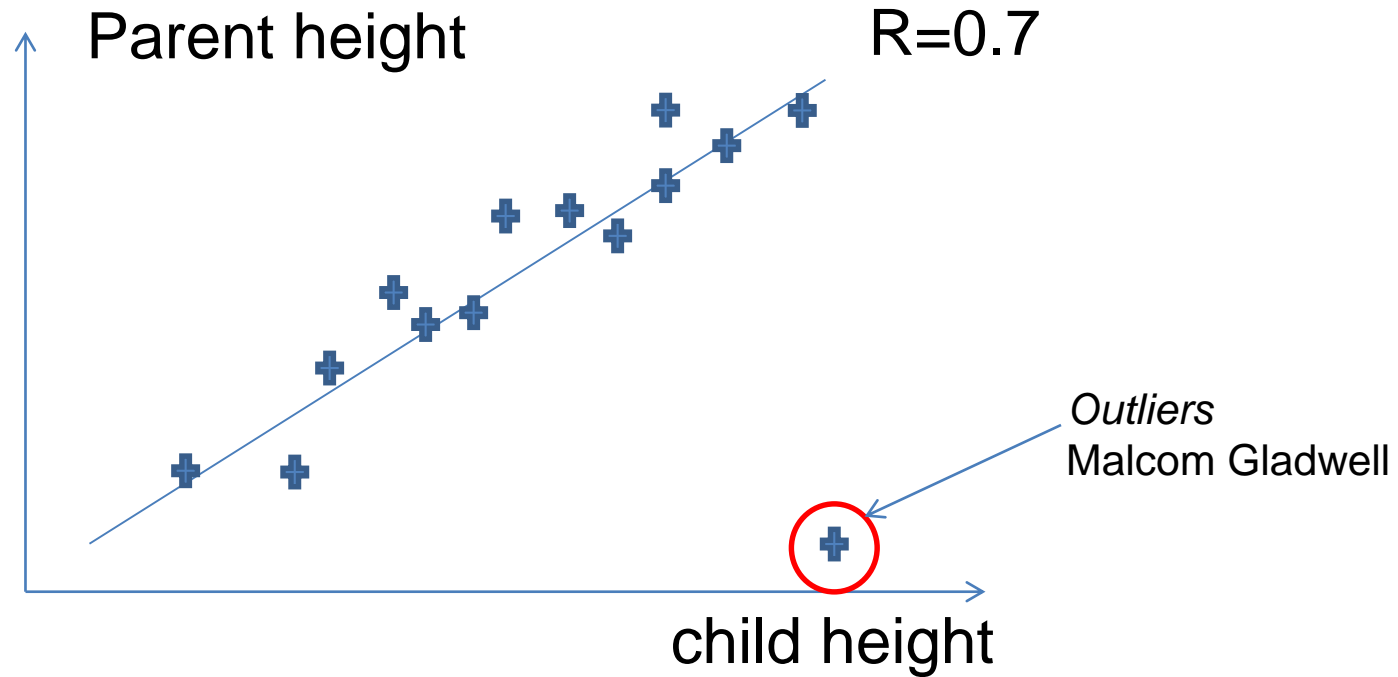


It is a gift.

**The only way to
make it live and
increase is to
use it.**

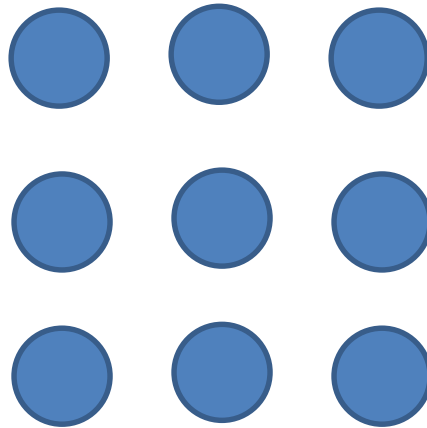


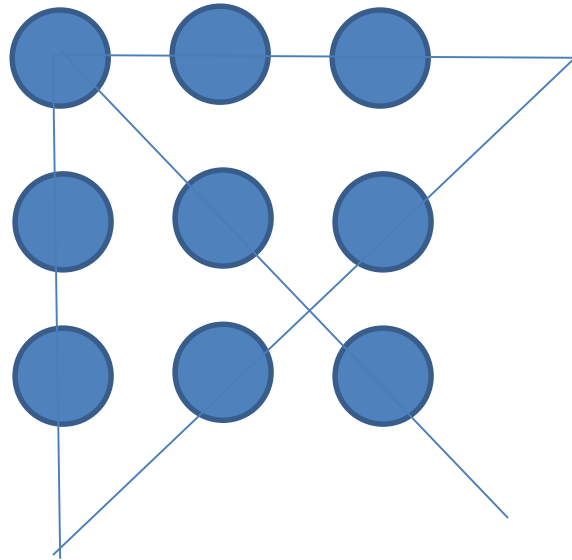
**You cannot be
sure that it is
not a *great* gift.**

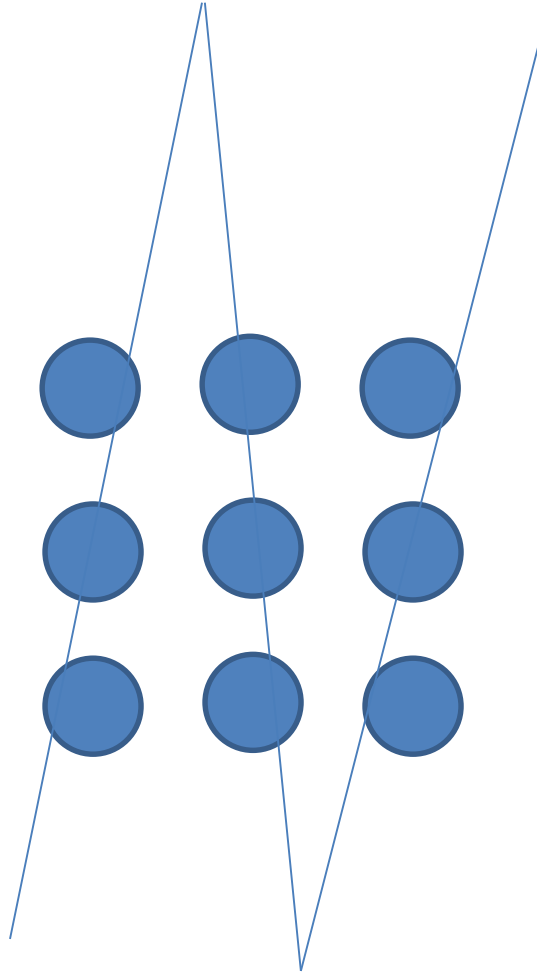


Innovation is not intelligence. ($R=0.2-0.3$)
Your abilities are not fixed.
Innovation can be taught/learned.

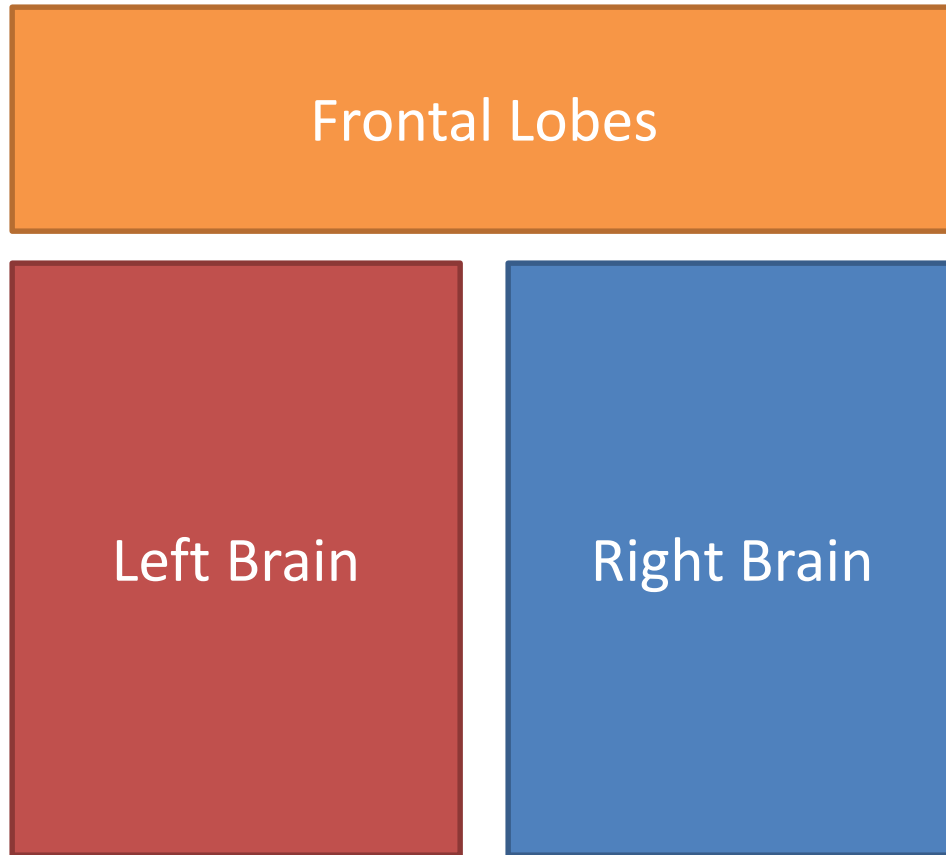
Link the 9 dots with no more than
4 straight lines without lifting your
pencil







Remote Associations



Cream

Skate

Water

Dog
Road
Spray

Dream
Break
Light

❖ How important is innovation to your work organizational structure?

A. Vital

B. Encouraged, but not my top priority

C. Not important

D. Discouraged

E. Looked down upon

❖ What role do you believe innovation plays in your field in the years to come?

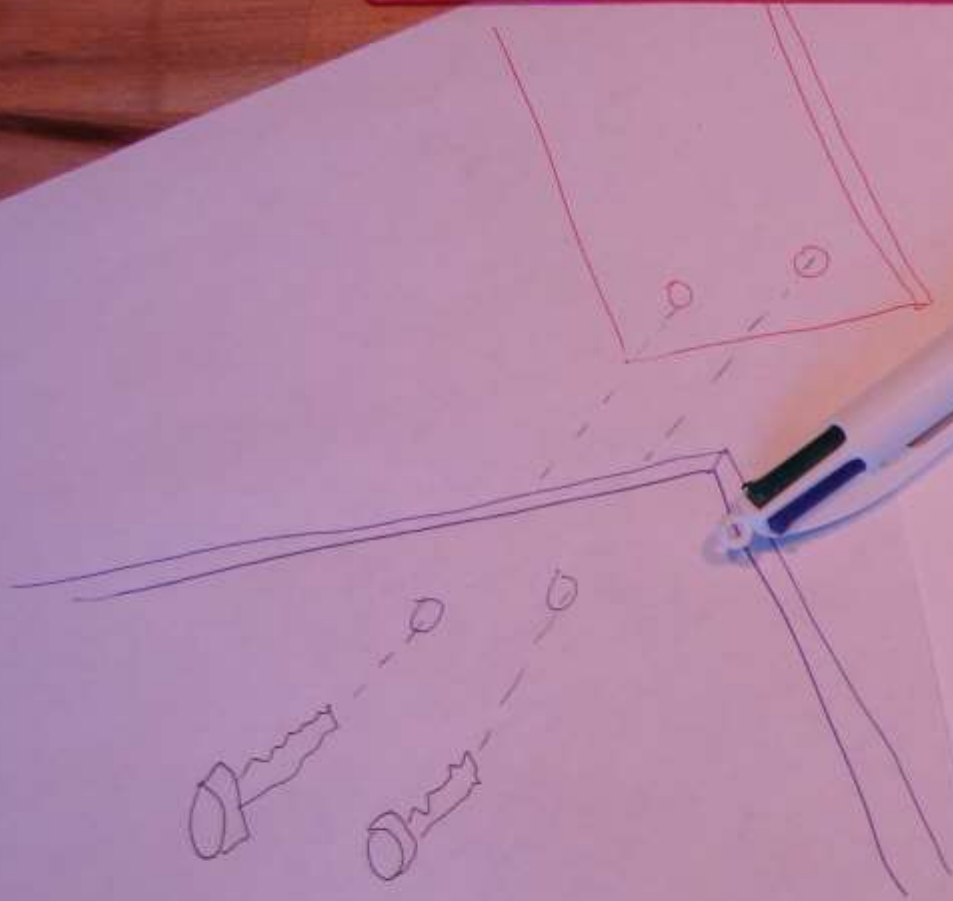
A. Absolutely necessary- It won't survive without it

B. It will be necessary for the industry to grow and develop

C. It keeps things fun for our customers, but sales aren't impacted

D. Minimal- We pride ourselves on the consistency of our quality product/service

E. None whatsoever



- TO DO
- prepare Ignite Lincoln Talk
 - Complete FRA final report
 - pay bills
 - buy wife flowers
 - go to stupid meetings

Make a Decision

Good

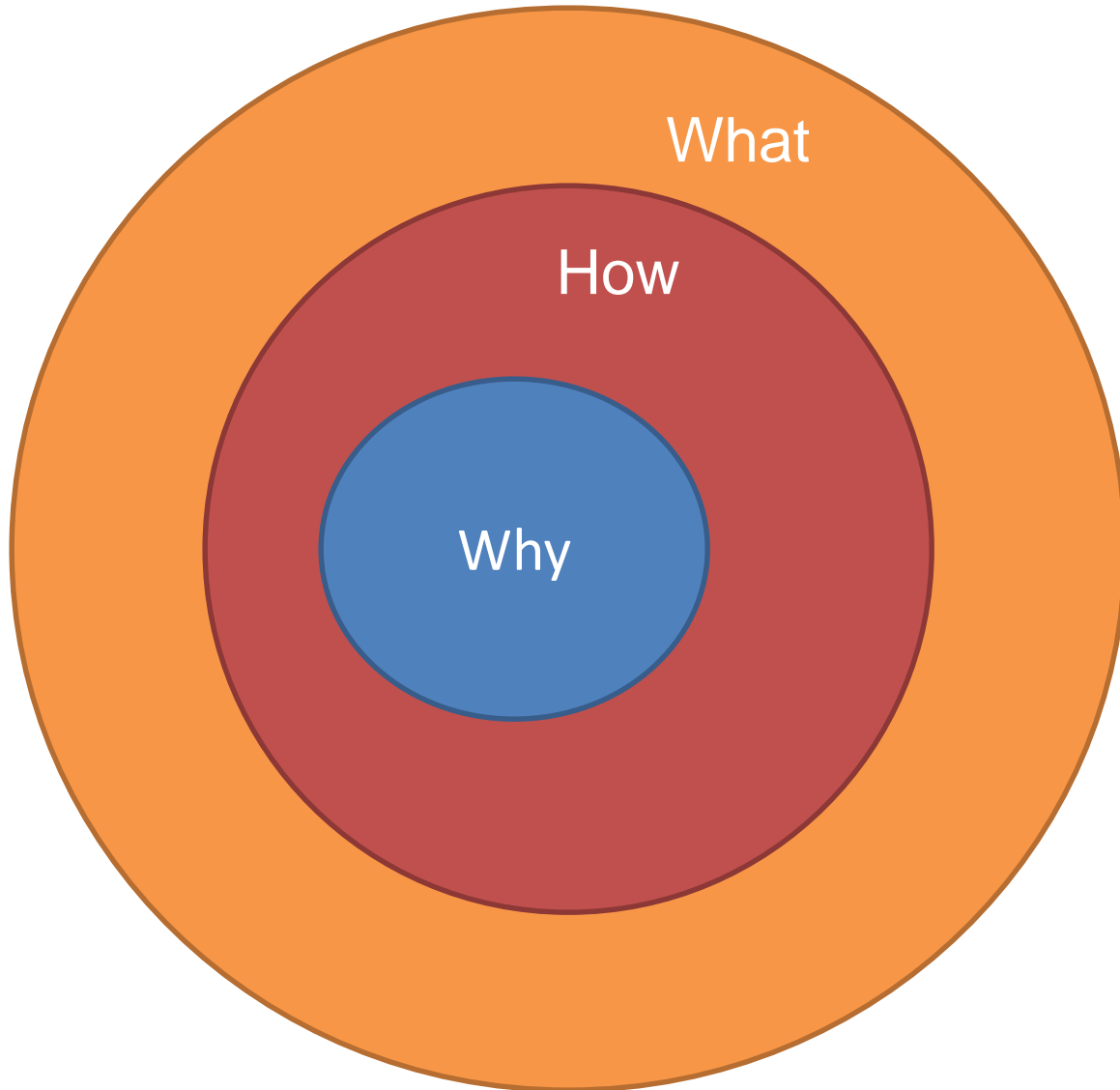
+

Different

=

Innovative

Start with Why (Simon Sinek)



We are educating people out of their creativity.



Everything that is important about art I cannot teach you.

Oct. 20: Little Bets

Nov. 1: Brainstorming and Other Thinkertoys

Nov. 3: Orbiting the Giant Hairball

Nov. 15: Where Good Ideas Come From

Nov. 22: What in the Heck Are You Talking about?

Tool #1:

Little Bets

A Little Bet: Take Action to Discover What To Do

Don't intentionally try to fail, but know that you will make important discoveries. Look for small wins.



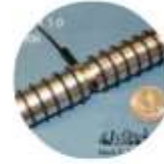




Making is a better
way of thinking



2003



2005



2006



2010



2015



Take a Little Bet





What is a little bet

- An action
- An allocation of resources
- A careful eye on outcomes
- Examples
 - Walk across the room to talk to someone
 - Build a prototype
 - Take a prototype to customers
 - Make 20 units and sell them at a loss

Big vs. Little Bets

It's better to fix problems than prevent errors.

- Little bets inevitably involve failure.
- Experimental innovators view failure as both inevitable and instrumental
- Focus on doing, rather than planning



Little Bets Create Small Wins

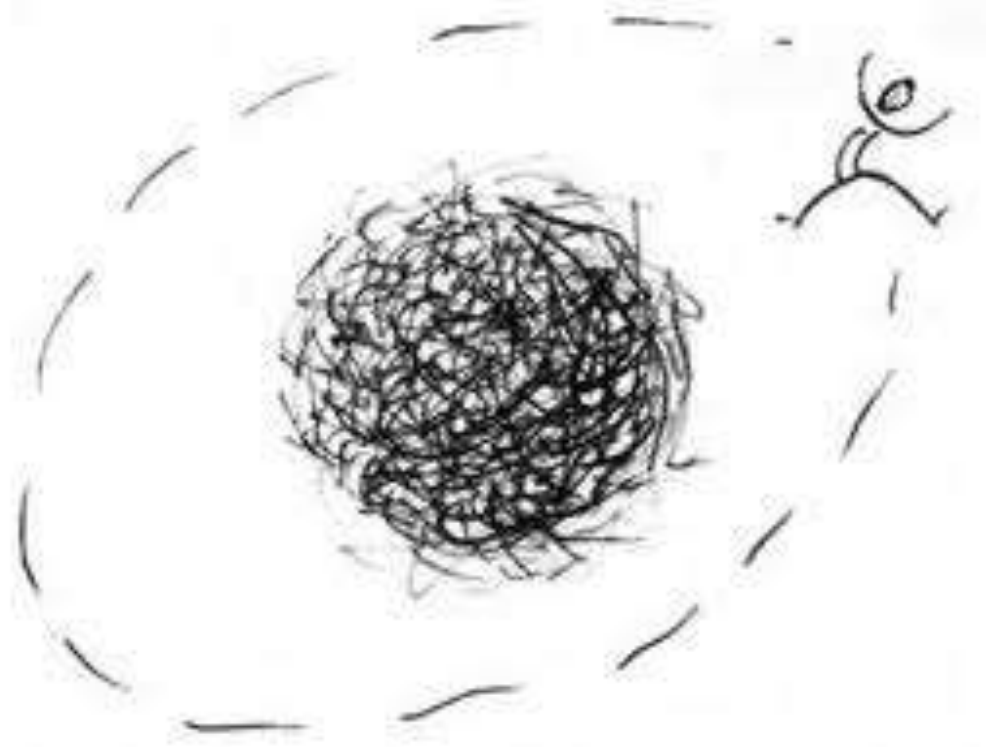
Think Pixar

- a concrete, complete, implemented outcome of moderate importance
- Watch closely – this is what you build upon
- Small wins favor another small win
- Small wins do not combine in a neat, serial, linear form to a predetermined goal
- Small wins are scattered and cohere only in the sense that they move in the same direction . . .

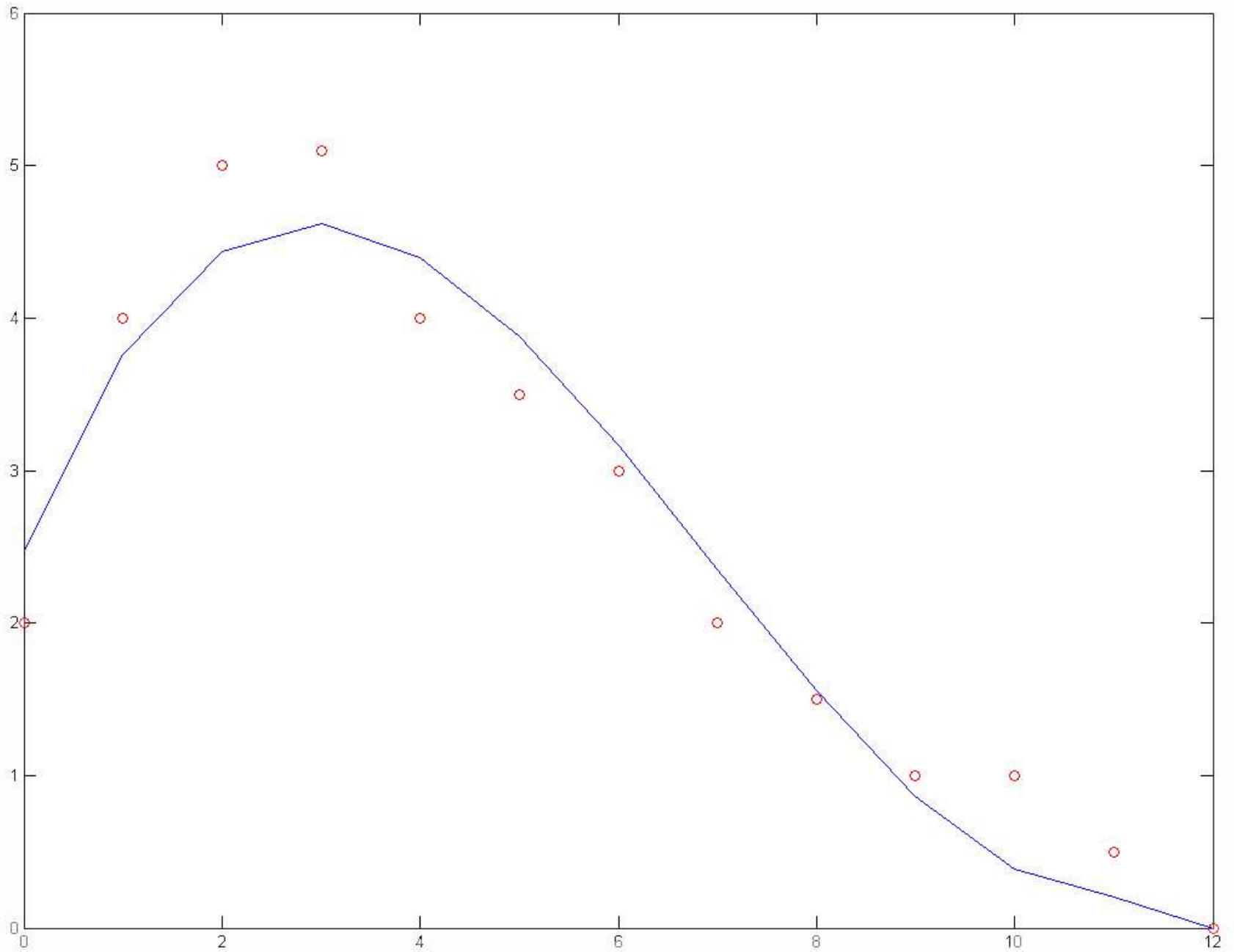
Tool #2:

**Orbiting the Giant
Hairball**

Orbiting the Giant Hairball



Number of Interruptions



Minutes Between Interruptions

Tool #3:

**Where good ideas come
from.**

Where Good Ideas Come From



The Reef, City, Web

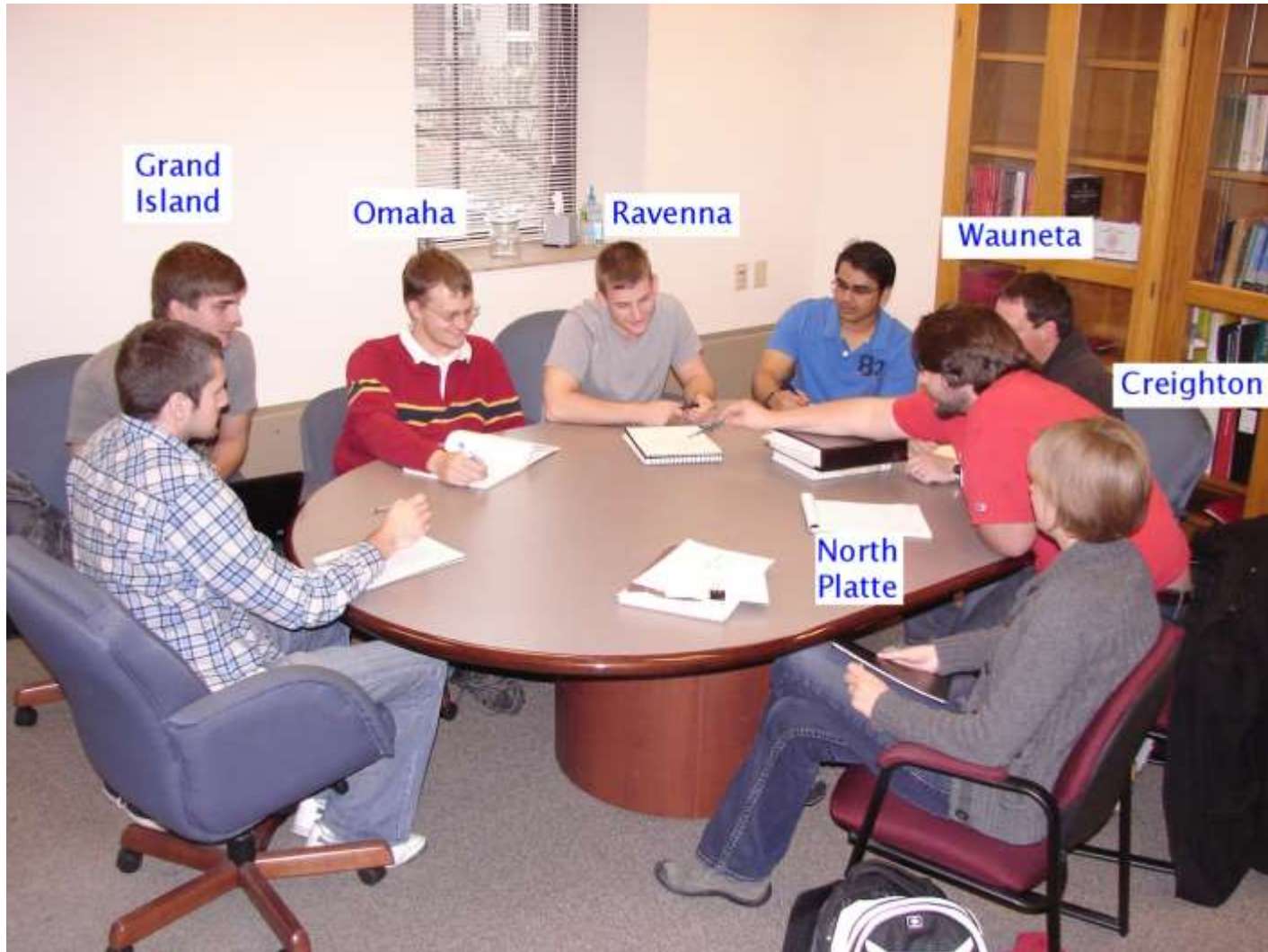


(mass scale)**(1/4)

Liquid Networks



Liquid Networks



The Slow Hunch

FEDERAL BUREAU OF INVESTIGATION

Precedence: ROUTINE

Date: 07/10/2001

To: Counterterrorism

Attn: RFU
SSA David Prasca
IRS Elizabeth Harvey Ma
UBL Unit
SSA Rodney Middleton
IRS Jennifer Maitner
IRS Mark Connor
IRS Fred Stremmel
I-46
SSA Jack Cloonan
SA Michael S. Butsch

New York

From: Phoenix
Squad 16
Contact: SA Kenneth J. Williams [REDACTED]

Approved By: Kurtz William A

Drafted By: Williams Kenneth J

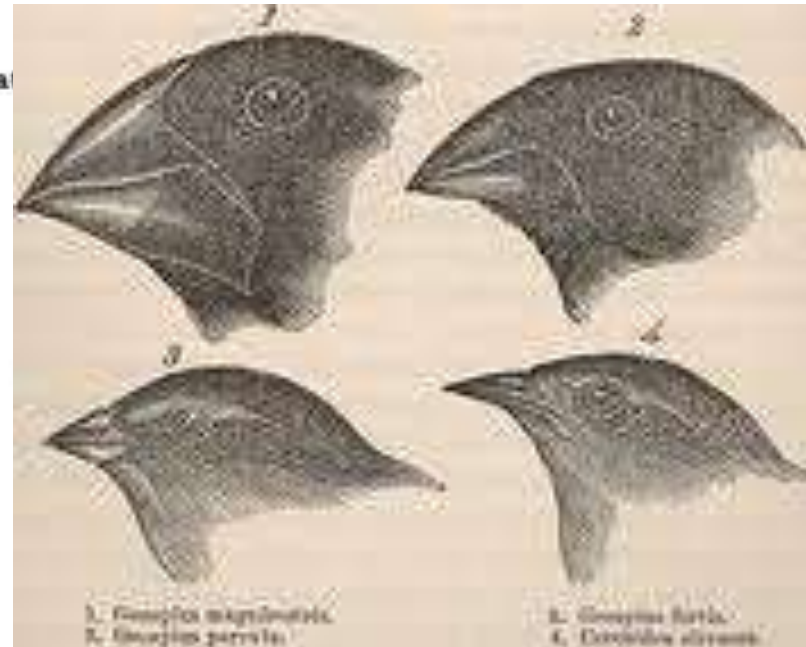
Case ID #: [REDACTED] (Pending)

Title: [REDACTED] ZAKARIA MUSTAPHA SOUBRA;
IT-OTHER (ISLAMIC ARMY OF THE CAUCASUS)

Synopsis: [REDACTED] UBL and AL-MUHAJIROUN supporters attending civil aviation universities/colleges in the State of Arizona.
[REDACTED]

[REDACTED] Full Field Investigation Instituted: 04/17/2000 (NONUSPER)

Details: [REDACTED] The purpose of this communication is to advise the Bureau and New York of the possibility of a coordinated effort by



Tool #4:

Thinkertoys

Thinkertoys – False Faces

- False Faces
 - Find ideas by reversing conventional assumptions
- Restaurant:
 - Wait to be seated
 - Sit down
 - Server brings menus
 - Server brings drinks
 - Server asks for order
 - Order Food
 - Wait
 - Server re-fills water
 - Eat food
 - Server asks about desertpay bill, leave

Thinkertoys – False Faces

- False Faces
 - Find ideas by ***reversing*** conventional assumptions
- Restaurant:
 - Wait to be seated
 - **Could we have a restaurant where you don't wait to sit down?**
 - Sit down
 - **Could we have a restaurant where you don't sit down?**
 - Server brings menus
 - **Could we have a restaurant where you don't have menus?**
 - Server asks for order
 - **Could we have a restaurant where there is no choice in food?**
 - Order Food
 - **Could we have a restaurant where there is no food?**
 -pay bill, leave
 - **Could we have a restaurant where you don't pay for food?**

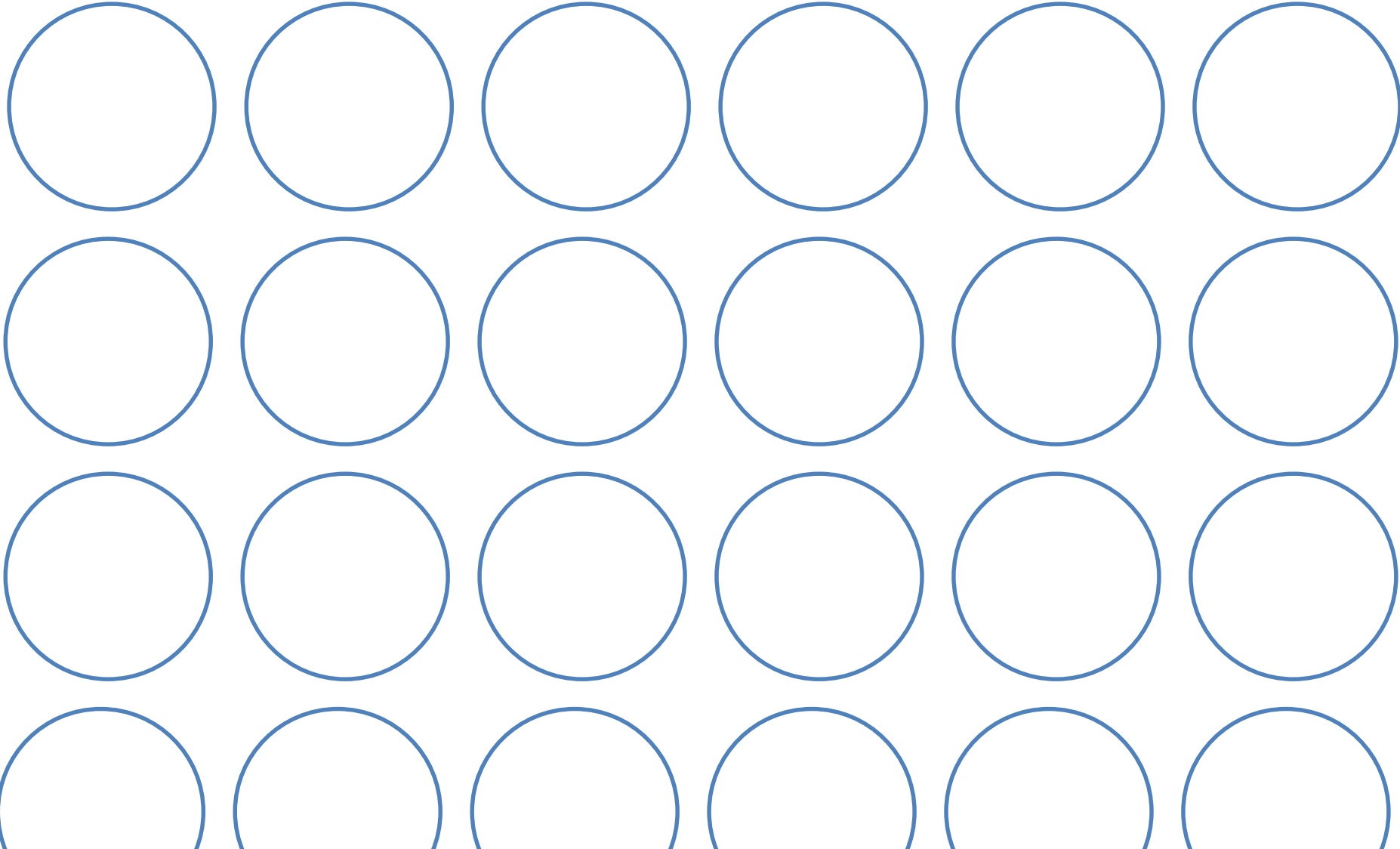
Be an Innovator



Choose to do something.

Choose to be special.

A Whack on the Side of the Head (an exercise)

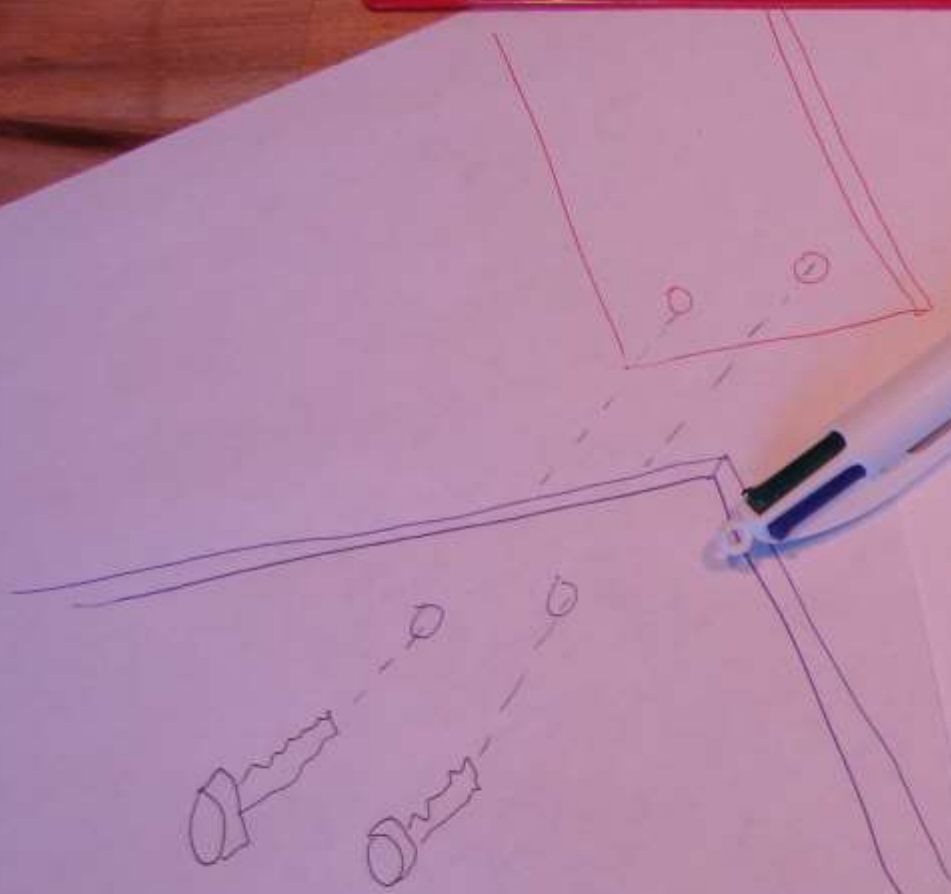


The Lotus Blossom

6	3	7	6	3	7	6	3	7
2	F	4	2	C	4	2	G	4
5	1	8	5	1	8	5	1	8
6	3	7	F 6th THEME	C 3rd THEME	G 7th THEME	6	3	7
2	B	4	B 2nd THEME	CENTRAL THEME	D 4th THEME	2	D	4
5	1	8	E 5th THEME	A 1st THEME	H 8th THEME	5	1	8
6	3	7	6th Sub-theme A,F	3rd Sub-theme A,C	7th Sub-theme A,G	6	3	7
2	E	4	2nd Sub-theme A,B	A centralized 1st THEME	4th Sub-theme A,D	2	H	4
5	1	8	5th Sub-theme A,E	1st Sub-theme A,A	8th Sub-theme A,H	5	1	8

6	3	7	6	3	7	6	3	7
2	F SUPPLIERS	4	2	C TRAVEL EXPENSES	4	2	G PARTNER- SHIPS	4
5	1	8	5	1	8	5	1	8
6	3	7	F SUPPLIERS	C TRAVEL EXPENSES	G PARTNER- SHIPS	6	3	7
2	B EVAL- UATION	4	B EVAL- UATION	ADD VALUE	D DELIVERY METHODE	2	D DELIVERY METHODES	4
5	1	8	E FACILITIES	A TECH- NOLOGY	H PERSONNEL	5	1	8
6	3	7	6	↓	7	6	3	7
2	E FACILITIES	4	2	A TECH- NOLOGY	4	2	H PERSONNEL	4
5	1	8	5	1	8	5	1	8

Gifts



TO DO

- prepare Ignite Lincoln Talk
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- go to stupid meetings



Adopt a growth mindset.

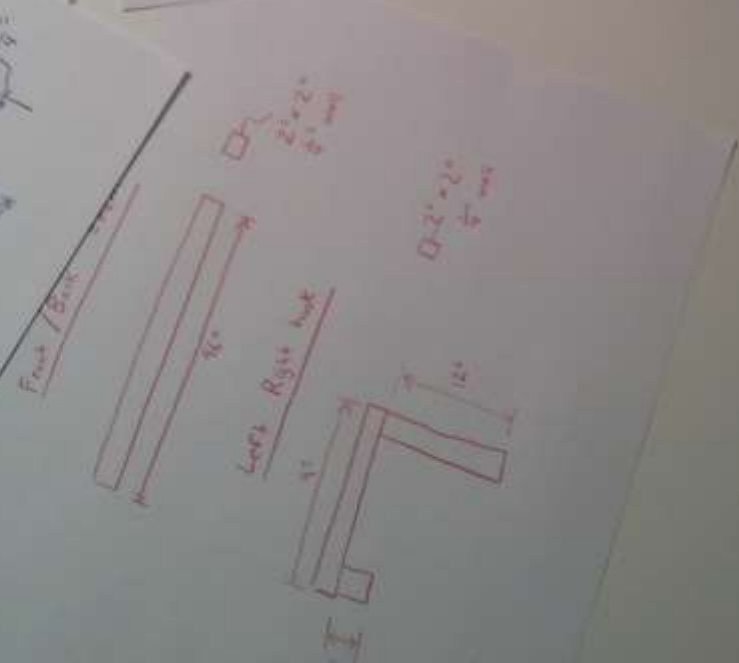
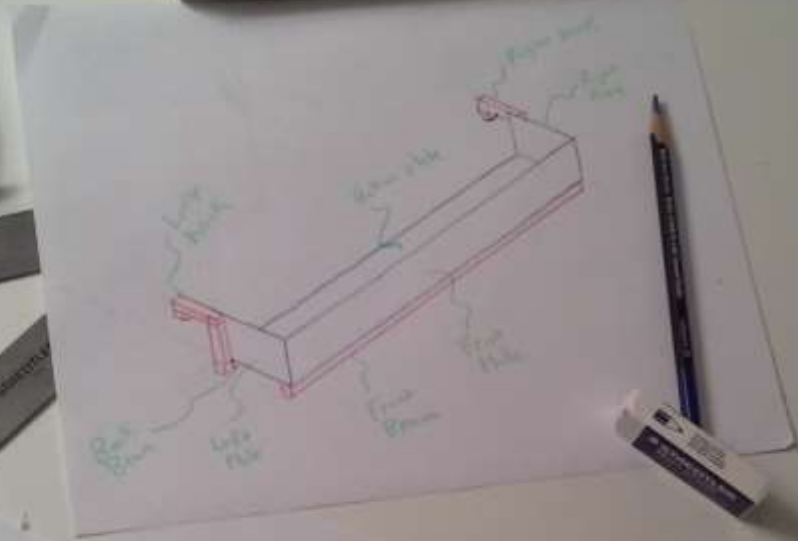
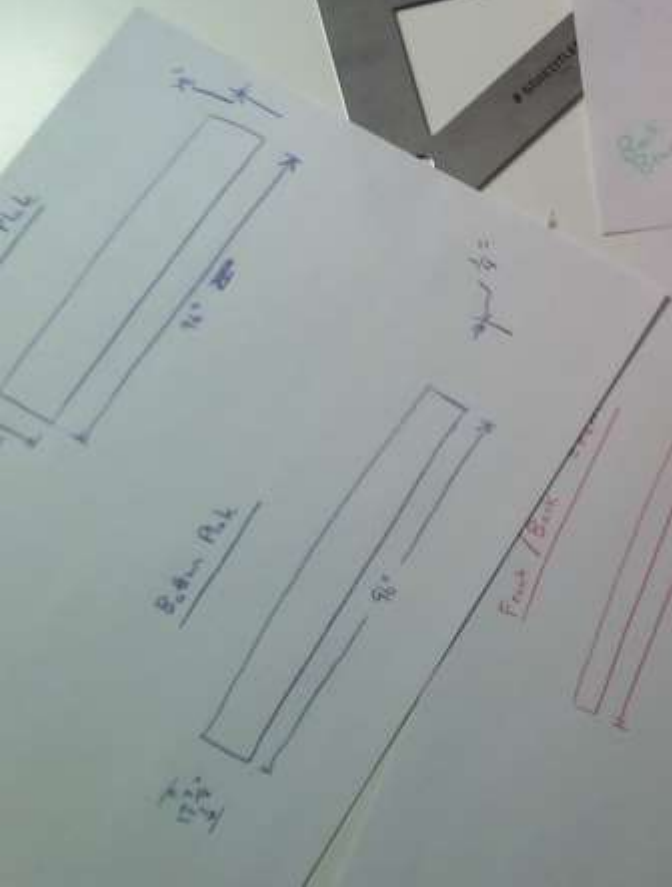
**Put in effort to develop
your gift.**

Share your gift generously.

Be an Innovator



Give your gift. Be creative. Be generous.



Tool #5:

Communication

ERROR #1:
It's all about me



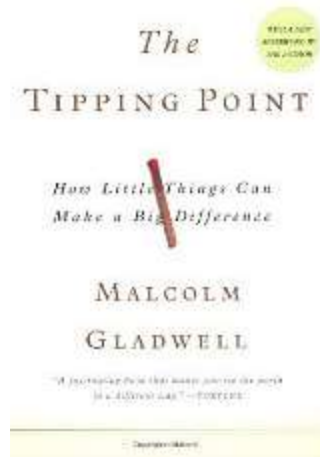
ERROR #2: The Curse of Knowledge



2.5% vs. 50%

Review of Test Data Indicates Conservatism for Tile Penetration

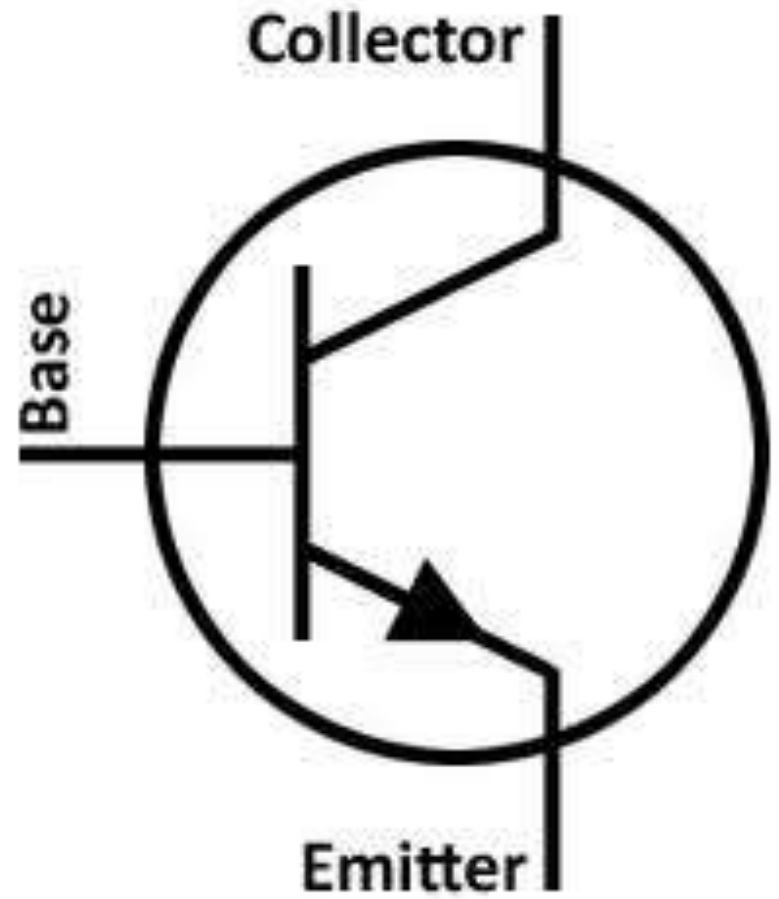
- The existing SOFI on tile test data used to create Crater was reviewed along with STS-87 Southwest Research data
 - Crater overpredicted penetration of tile coating **significantly**
 - Initial penetration to described by normal velocity
 - Varies with volume/mass of projectile (e.g., 200ft/sec for 3cu. In)
 - **Significant** energy is required for the softer SOFI particle to penetrate the relatively hard tile coating
 - Test results do show that it is possible at sufficient mass and velocity
 - Conversely, once tile is penetrated SOFI can cause **significant** damage
 - Minor variations in total energy (above penetration level) can cause **significant** tile damage
 - Flight condition is **significantly** outside of test database
 - Volume of ramp is 1920cu in vs 3 cu in for test



A Sticky Idea

“...your brother was dead and is alive again;
he was lost and is found.”

-Luke 15:32



Sticky Ideas Share Common Traits

- 1) Simplicity
- 2) Unexpectedness
- 3) Concreteness
- 4) Credibility
- 5) Emotions
- 6) Stories

Simple = Core + Clear

Don't Bury the Lead

If you say 3 things you say nothing

Simple



Books?.....What are they every going to teach you?

Go!

- You can innovate. We all had crayons & legos & fashion shows.
- Go ahead and make something.
- Make something really special.
- Make something amazing that will blow the mind of anyone who sees it.
- Go change the rules, go raise the bar.
- Give your gift.

....things I think I know.

Angel Investors

- Give back & IRR.
- Help a young person from making the same mistakes.
- Live vicariously through a new business.

Venture Capital

- You'll do the best when you don't need them
- Build a business
- Get an intro
- Pitch, Pitch, Pitch
 - Necessary but not sufficient
- Show Traction
 - Revenue.....tests.....prototype.....mom
- Clean up your act
- Disclose Everything
- Tell new “lies”
 - You're the 10am

“Lies” Entrepreneurs tell VC’s (and themselves)

- Our projection is conservative.
- _____ says our market will be \$50 billion in five years.
- (big company) is signing a contract with us next week.
- CXX key employee will join us as soon as we get funded.
- Several investors are already in due diligence.
- (big company) is too big, old, and slow to be a threat.
- Our patents make our business defensible.
- All we need is 1% of the market.
- We have first mover advantage.
- We have a proven team.

You won't be “discovered”

Nobody suddenly discovers anything. Things are made slowly and painfully. Put in the hours.



Team, Team, Team, Market, Idea



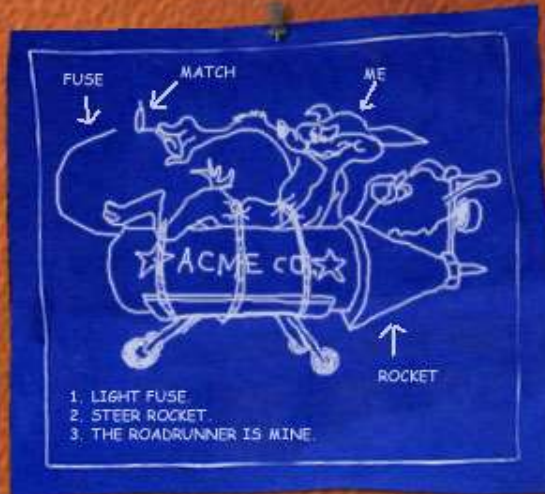
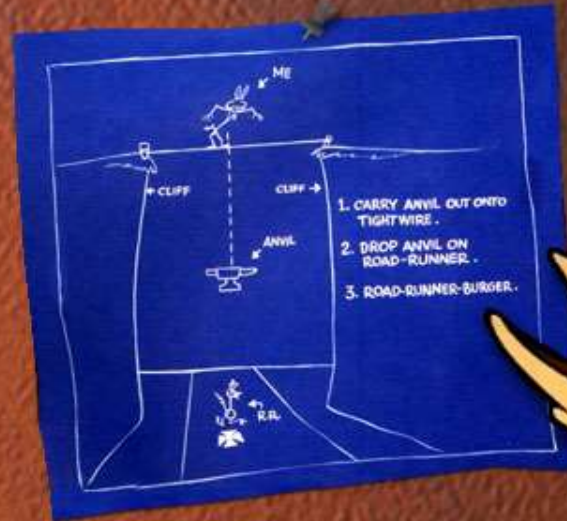
Find a *good* mentor

- UNeMED, NUTech
- Early Investor
- Other
Entrepreneurs



work on a problem that matters





Have a
plan.



Build Meaning

- Funerals.com
- We put the FUN in funerals
- Tivo



What is it worth?

Anything You Want by Derek Sivers

IDEA	
Bad idea	-1
So-so idea	1
Good idea	10
Great idea	15
Out of the park idea	20

X

EXECUTION	
no execution	\$1
So-so execution	\$10,000
Good execution	\$100,000
Great execution	\$1,000,000
Out of the park execution	\$10,000,000

Multiply your idea and execution = value

- Crazy uncle Larry says “I had the idea for Ebay way before.....”
 - $20 \times \$1 = \20
- How about a so-so idea with great execution?