

Cybersecurity Technology to Practice

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Technology

Governance
and
Management

Marketing
and Sales

Execution
and
Fulfillment

Intellectual
Property
and
Special
Sauce

Financial
Situation
and Path

Legal
Situation

Adoption

It's a long way
It takes a long time
It takes a lot of effort
You likely cannot do it alone

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How do I know this (cybersecurity)?

Started Early

Child's Play
Project Solo and hacking as a kid
High school computer admin
ARPA-net node 8? – DISN – AutoVON/AutoDIN
DATPOL / Project Hearsay Librarian
PDP 11-4e Microcoded vision instructions

BS to MS

Automatic lights out
Robotic dead dog
Radon detector image processing
Legal Software Incorporated

MS to Ph.D.

A car or an apartment
Consultant and Teaching then Research Assistant
Distributed Parallel Processing
Computer Viruses – Defenses – A-Life
Management Analytics

Professor

CEO – TRP 8-250 employees in ~3 mo
All Things Incorporated → all.net
1st remote Internet vulnerability scanner
1 company per year
Sandia – Patent Licensing
Cyber Defenders
Critical infrastructure assessments
Digital forensics and investigations
Expert witness litigation support
Started a University
Deception patents and more
Burton Group
Management Analytics Again
Influence and Decider
Insider Defenses R&D
Keiretsu Forum
A2E → 100 comp / year 6th largest
GWiz™ and JDM and ...
~40 Companies in portfolio
The Cyber Show™
Soon adding ~10/year

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I have some experience at this...

We Help Grow Companies

The old fashioned way... we earn it

- I cannot teach you what I learned since the 1970s in a few years
- Neither can each of the people on the team you will need
- And we cannot mentor you to get it all done on your own

Startup → Emerging → Growth → Market Leading
To be successful you need to mature a company

Or you could have someone else do it for you
But that almost never works until mid-“Growth” stage

And cybersecurity is NOT like food or vacations

- Nobody really “wants it” – they get it because they have to

What does it take to succeed?

What is success?

To achieve your goal, clarify it to yourself
Then explain it to me

If it's not business success

Enjoy yourself
At your own expense of time and money

If it's business success

It's not about you
It's about the business

What do you expect for success in your field?

- Do your students know as much as you?
- Are they as good at what you do as you are?
- How long did it take you to get there?
- What did you have to do to get there?

Your specialty is X (Chief Scientist?)

To succeed you will need as good an expert in:

- Governance and management (CEO)
- Sales and marketing (CBDO)
- IP and special sauce (CTO)
- Financial engineering (CFO)
- Legal and juridical issues (CLO)

And the team and technology to support them

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Each specialty is at least as hard as yours

Some big mistakes / How hard can it be?

Build a better mouse trap?

The second best technology usually wins
It's usually about differential benefits
You have to make enough of a difference
Or it's not worth changing it

Quality is the key?

To what door?
Why is McDonalds so successful?
It's a competitive world
How can they tell the difference?

Engineers/Scientists can sell?

Telling the "whole truth" is a disease
(and impossible to do)
There is such a thing as too much information

What do you need to do?

- Form a company (What kind and where?)
- Structure it (Organized how?)
- Hire leadership (Who and why?)
- Govern it (What's the feedback system?)
- Explain it to others (To whom, how, and where?)
- Motivate them to pay you (What do you promise?)
- Sell something to them (What and how?)
- Do it again and again (How is it systematized?)
- Fulfill the orders (How do you fulfill your promises?)
- Get paid for it (How, how much, and when?)
- Fight off competition (What barriers and stickiness?)
- Fund it over time (Why invest in this?)
- Get it cash flow positive (How to sustain it for now?)
- Get it profitable enough (How to sustain it longer?)
- Evolve it over time (How to adapt and how fast?)
- Do it all legally (What laws and how they bend?)
- Do it all ethically (How to resist temptation?)
- Do it all quickly enough (How long do you have?)
- Get to an exit (Who will buy it all from you?)

What could go wrong with all of this?
How do you make sure it goes right?

You are betting our good name on it!

Table of Contents

- Company Overview
- Governance and Management
- Marketing and Sales
- Fulfillment Strategy and Cost
- Intellectual Property and Special Sauce
- Financial Situation and Path
- Legal Situation
- Company Summary
- Management Statement and Outlook
- Risk Review

All I need is the money to do it

Wrong answer

My first questions:

Who sells what to whom and how?
Who does what to fulfill and how?
What does it cost and what's left?

IF these answers are OK

I will have more questions

OTHERWISE

We are done

What makes answers OK?

You are able to answer them

Clearly and simply

Your answers make sense

To me / your audience

What it costs is worth what's left

As an investment under my model

These are technical questions

For business development

Your technology is not the issue

Not in your technology area

No matter what your technology is

Not in your technical language

You need to know business language

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Something you don't know – that we do

How will you finance what?

Owner
Employees
Loans
Notes
Factoring
Equity
Trade
Credit
Customer
Grants
Donations
Crowd
Public
Other

Likely it's a mix

**How have you engineered it?
Why did you do it this way?**

What are the financial risks?

Allowance for Credit Losses
Commitments and Contingencies
Deferred Acquisition Costs
Depreciable Assets
Derivatives
Income Tax Reserves
Interest Payables
Interest Receivables
Investment Securities
One Time Items
Operating Expense Accrual
Related Company Valuations
Salaries and Benefits Accruals
Other Variations From Projections

Facts and evidence for this?

Assumptions behind it?

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Who will invest, why, when, what?

They are all different*

They range from individuals to Enterprises
They each have their own approach
They each want it their way

We tend to divide them into classes based on:

- How much they invest and how often
- The processes they tend to use to decide
- The rules they put in place for deal terms
- The way they make decisions
- The things they invest in

Each has to be sold individually

*Except crowd funding...

The Golden Rule:

**Who Has the Gold
Makes the Rules**

Private equity

Corporate Venture Capital

Family offices

Venture Capital

Angel investors

Crowd funding*

Friends and Family

Founders and workers

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You can't get \$10M from a pauper



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What do they look for?

They buy for a reason
They want more money out
Than they put in

Emotion and Reason
 Balance differently for different investors

The investor is usually investing in:

- The jockey and the team (trust)
- The risk and reward (deal)
- The ability to reach a big market
- The ability to fulfill the promises
- The barriers to entry and exit
- The financial plan and engineering
- The legal issues (risk management)
- The match between them and you

They are making a bet
The bet has to make sense to them

SECOND RACE - SANTA ANITA

Today's Racing Digest

Distance: 6 1/2 Furlongs Race Level: Base 150 Race Cond: CLM 25
 Conditions: CLAIMING FOR THREE YEAR OLDS AND UPWARD, Three Year Olds, 121 lbs.; Olden 134 lbs.; Non-Claiming 145 lbs.; Allowance 150 lbs.; September 8 Allowance 160 lbs.; Claiming Price \$25,000. If for \$22,500, allowed 2 lbs. (Maximum and Claiming races for \$20,000 and below are considered).

Track Profile: 14 races F=54.3% P=7.1% M=21.4% R=7.1%

HORSE	JOCKEY	PRE	WT & AGE	CLG	SEX	RCL	RCL + CPR	TOI	PER	HANDICAPPING	EQUIP	TRouble	OFF	BEST PREY	PAST	AVG	CLM	CLM
(Post Position Order)		NUM		CHNG						FACTORS			TRK	SUR	CLS	CLS	RCL	CPR
Sea Rascal	Bejarano	85	122-1	8g	160	145	128	273	R	104.15a.19	B			137	138	170	X	106
Prince Intent	Gutierrez	84	122-2	4g	155	160	95	256	P	104.21	B			134	134	165	X	95
Galleta Monstruo	Rosario	74	122-2	5g	145	145	99	244	R	10c.19.21	X			99	140	160	X	99
Brady Blue Eyes	Vergara	81	122	4g	150	155	123	278	P	21	B			129	134	170	X	107
Hasty Trend	Delgado	80	122+2	5g	150	x	118		P	21r.23.25	X			X	127	150	X	127-
Valkyrie Missile	Valenzuela	85	122	5g	160	155	125	280	?	104.21	X			X	132	160	X	123

FRACTIONAL CHART ORDER OF FINISH AND AVERAGE TIMES

1: Valkyrie Missile and Brady Blue Eyes (tie) ET: :21.4, :44.1 and 1:16.6 (Expected Times with a 0 variant)
 2: Sea Rascal AT: :21.7, :44.4 and 1:15.5 (Average Times for mid-level races)
 3: Hasty Trend AFT: :21.8, :44.8 and 1:15.1 (Average Times for this level)

RACE APPRAISAL

ANALYSIS: Sea Rascal is an old-timer who won twice during the last Santa Anita winter meet and Bejarano has appreciated the move back to a dirt sprint and he has been competitive with this kind in his last two. Prince Intent was up for a pair of those wins and he could be a threat if he can improve off his last two. Hasty Trend hasn't been seen since his 2nd vs. similar turf sprinters June 20, 2010. He has seven works since Sept 10 with one exceptional for a barn that can pop with a comebacker. It seems encouraging he is brought back for the same tag, but he is still for sale despite the rule that they can waive the claiming tag for a runner being off nine months. Still, we'll tab the tote for more clues as to his readiness.

What could go wrong?

Sea Rascal is back from No Cal after five starts and was 7th vs. NW2 Optional Claiming turf routers Oct 2. He has won two of three sprints over this oval and was 2nd in his last dirt sprint for this tag June 23. Bejarano was up for a pair of those wins and he could be one to fear late.

Brady Blue Eyes has good early speed, but hasn't shown much stick at and above this level of late. He is a dirt sprint winner, but was four lengths back of neighbor Monstruo Aug 11 and we'll limit him to a minor award.

Sea Rascal (J.Hollendorfer/Rosario) 25 5-3-4-1
 8G - Salt Lake (10%T, 11%S, 17%M) - Tack Walk by Misaki

TRAINER STATS:
 LAST 15: (40.0%) 15 6-3-1
 R/S: (20.8%) 192 40-26-34
 DOWN: (26.8%) 343 92-70-51

Prince Intent (T.Taylor/M.Gutierrez) 139 45-37-20
 4G - Regal Intention (3%T, 10%S, 14%M) - Marker's Mariah by No Marker

TRAINER STATS:
 LAST 15: (6.7%) 15 1-1-5
 60+: (30.4%) 23 7-7-3

TRK	DATE/RACE	POST	FIN	TRK	TR	TR	TR	TR	TR	TR	TR	TR	TR	TR	TR	TR	TR	TR	TR						
GG	10/2/11-9	11	69-0	123	JH	D	Lpz	FM	NONE	AOC	50NW28-X	R10-0	C106	7-3	23.4	46.8	5-1115	1450a	311	140	111	Lb			
GG	8/28/11-1	1MA	16-0	123	JH	D	Lpz	FT	01	AOC	32NW16-X	R145	C117	3-055	M5	A20	-3	3-244	3-481	3-1120	21-389	1450	330	117	Lb
SAC	7/20/11-9	1M	45-1	119	JH	R	Dbe	FT	02	SFR	125-0	R145	C128	4-225	M2	A15	-6	3-264	4-803	4-1135	3-1300	1455	320	90	Lb
PLN	6/23/11-7	8F	38-0	119	JH	R	Dbe	FT	02	CLM	25-225	R150	C128	2-100	M3	A12	+1	6-233	6-459	3-1016	1-168	309	104	131	Lb
GG	5/27/11-1	8FA	55-0	123	JH	D	Hdz	FT	NONE	AOC	50NW28-X	R150	C120	4-270	M3	A21	0	2-226	3-458	2-1110	1-172	314	116	125	Lb
HCL	5/19/11-8	610A	75-1	120	JH	D	Hdz	FT	NONE	ALW	W28-X	R170	C132	4-390	M3	A64	-6	5-225	4-451	5-1098	1-195	314	128	125	Lb

NOTES: named 3rd, gave way 10/2/11, pressed 3w late gain 8/1/11 rail trip, weakened 7/1/11 rally 4 wide, held 2nd 6/4/11

SA DIRT SPRINTS 0 0-0-0 ALL DIRT SPRINTS 8 3-3-1
 DIRT SPR: (31.6%) 15 6-3-1
 T/D: (21.7%) 23 7-7-3
 LAST 10 FIRE: 76, 87, 87, 85, 81, 85, 92, 88, 80, 84

WORKS: SA Oct 19 50.2h # (41/60) SA Oct 9 101.6h # (58/76)
 SA Sep 29 100.6h # (17/61) SA Sep 17 105.4h # (56/57)
 SA Sep 10 50.4h # (39/50)

LAST 10 FIRE: 84, 96, 82, 74, 70, 81, 98, 89, 100, 65

What facts and evidence support it?

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How do they see the bet?



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Diligence is required

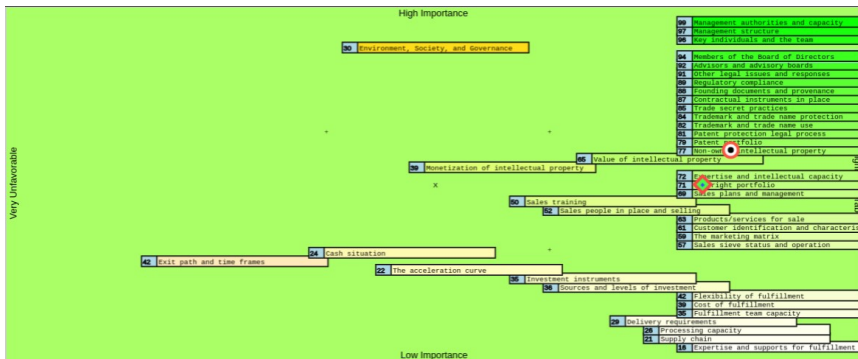
A great team playing well together

- Very experienced CEO at running companies
- Engaging solid team members known for years
- Great idea and huge market opportunity
- Added expertise along the way to get more funding
- Team helped with friends & family funding
- Product prototypes got built and tested
- Investors attracted more and outside investors
- Now ending possibly last equity round and executing

Fantastic opportunity

- With a compelling story CEO
- With a great idea
- With great connections
- Until the drill-down into diligence
 - The “team” were real people
 - Most not as good as portrayed
 - None actually engaged
 - The CEO “exaggerated”
 - Almost everything almost always
 - Many people made commitments
 - One after another disappointed
 - Never the CEO’s fault

Overarching Summary	Performance				Stage			Maturity		
	Subject Area	Score	Performance	Weighted	Diff	Score	Stage	Weighted	Score	Maturity
Governance and Management	92.86%	Running	9.29	2.50	93.33%	Growth	9.33	90.77%	Managed	9.08
Marketing and Sales	93.57%	Running	9.36	5.25	92.86%	Growth	9.29	93.57%	Managed	9.36
Execution and Fulfillment	97.14%	Sprinting	9.71	3.00	91.43%	Growth	9.14	93.57%	Managed	9.36
Intellectual Property and Special Sauce	95.00%	Sprinting	9.50	2.00	93.33%	Growth	9.33	92.73%	Managed	9.27
Financial Situation and Path	55.00%	Jogging	5.50	21.00	52.52%	Emerging	5.25	55.00%	Defined	5.50
Legal Situation	100.00%	Sprinting	10.00	N/A	100.00%	Exit	10.00	100.00%	Optimized	10.00
Average and weighted scores and totals	88.93%	[Running]	88.93	4.42	87.25%	[Growth]	87.25	87.61%	[Managed]	87.61



Fake it till you make it?

NO!!!

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Systematic diligence processes are rare

From here to where?

Technology

Adoption

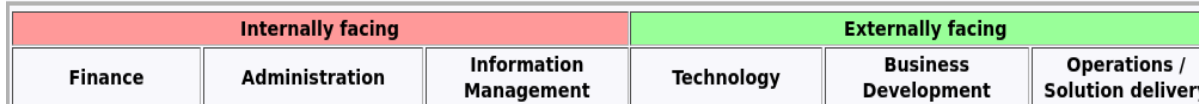
Measure

Overarching Summary	Performance				Stage			Maturity		
	Subject Area	Score	Performance	Weighted	Diff	Score	Stage	Weighted	Score	Maturity
Governance and Management	42.86%	Walking	0.43	11.25	40.00%	Emerging	0.40	44.62%	Repeatable	0.45
Marketing and Sales	15.71%	Sitting	0.16	37.50	12.14%	Startup	0.12	14.29%	Initial	0.14
Execution and Fulfillment	82.14%	Running	0.82	12.75	71.43%	Emerging	0.71	73.57%	Defined	0.74
Intellectual Property and Special Sauce	58.18%	Jogging	0.58	10.75	41.67%	Emerging	0.42	48.18%	Repeatable	0.48
Financial Situation and Path	18.00%	Sitting	0.18	17.25	17.16%	Startup	0.17	20.00%	Initial	0.20
Legal Situation	55.42%	Jogging	0.55	13.25	33.75%	Startup	0.34	40.00%	Repeatable	0.40
Average and weighted scores and totals	45.38%	[Walking]	45.39	13.91	36.02%	[Emerging]	36.02	40.11%	[Repeatable]	40.11
Performance	49.39%									
Stage	36.02%									
Maturity	40.11%									

Govern

Ownership and Board Cognitive System			
Intent: Self Image and World Image / Knowledge, theories, models of people, systems, and the World	Quality: (Personality, Vision, Objective Driven)	Schedule: (Urgency → Timing)	Budget: (Importance → Spending)
Information is received by the Chairman and Board and CEO →	Decision Time Frames: Urgent: Hours, Emergency: Days, Timely: Months, Day-to-day: Months, Periodic: Quarters, Occasional: Years	→ Decisions are made and executed by the Board and CEO	Ownership Control: Understand Business and Define Duties and Architect Controls and Directives
They get external Advice and Intelligence and Sharing and Feedback and Notifications and Conditions	→ They provide internal Advice and Influence and Orders and Requirements and Mandates and Directives	They provide outboard influence →	Executive Control: Understand Business and Define Duties and Manage Risk and Specify Operations and Verify Operations and Set Objectives
They get internal Intelligence and Feedback and Notifications and Conditions	→ They get external Advice and Intelligence and Sharing and Policy	They provide internal influence and Orders and Requirements and Mandates and Directives	

Manage



Explain

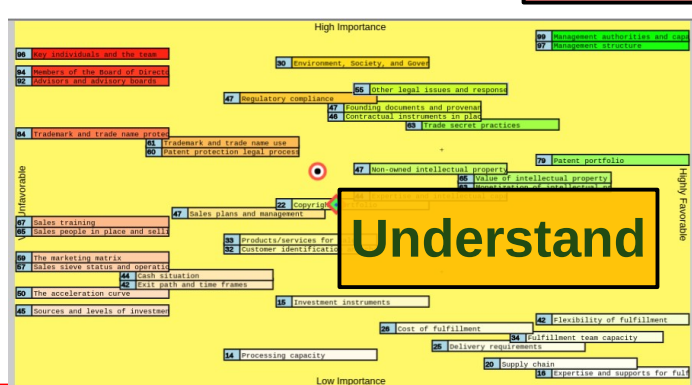
FireBot™
 Stop Half Of Home Fires
 Industry: Consumer Products
 Business problem: Residential stovetop fires cause billions of dollars of damage every year.
 Our solution: 5-year battery operated fire suppression device, installs in all kitchens 5 minutes, 139M units every 5 years in US.

Mature

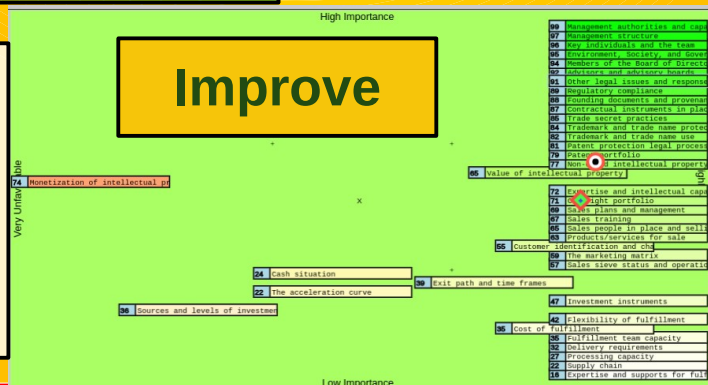
Startup → Emerging → Growth → Market leading
 None → Initial → Repeatable → Defined → Managed

Financial Projections	Actual	Projections assuming full funding as of today				
Last Yr	Year 1	Year 2	Year 3	Year 4	Year 5	
Revenue	-\$14,000,000	\$35,000,000	\$102,000,000	\$245,000,000	\$514,000,000	
Direct costs	\$350,000	\$5,900,000	\$12,700,000	\$37,000,000	\$89,000,000	
Gross Margin	(\$350,000)	\$8,100,000	\$22,300,000	\$65,000,000	\$156,000,000	
Indirect costs	\$2,000,000	\$4,000,000	\$6,000,000	\$8,000,000	\$10,000,000	
EBITDA	(\$350,000)	\$6,100,000	\$18,300,000	\$59,000,000	\$148,000,000	
Share (%)	N/A%	0.03%	0.04%	0.06%	0.08%	

Understand



Improve



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There are a lot of things to do



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The opportunity in front of you

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Menu

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- Membership
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We help grow companies

- We can help you grow yours
- Attend a monthly call
- Let's discuss a path forward

Technology



Adoption

ONLY IF
you are really serious about it

- The only thing any of us really have is time
- We only have so much of it
- We don't know how much that is
- Don't waste yours or mine

15,000+ Investors, Advisors, and Executives

Expert Advice

Technology

Events

In critical areas

- Governance and Management
- Marketing and Sales
- Fulfillment and Execution
- IP and Special Sauce
- Financial Situation and Path
- Legal and Regulatory Issues

Startup - Emerging - Growth - Market Leading

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