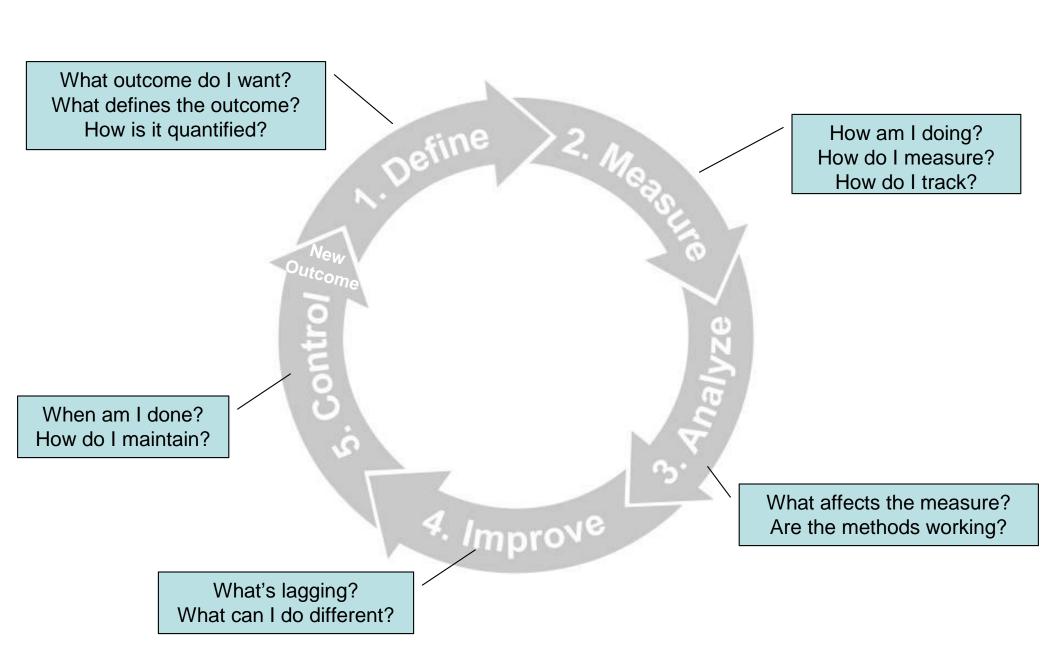
DMAIC Fitness

Matthew Velderman
Quantified Self Meet-up
May 22, 2011

DMAIC



Fitness Overview

GOALS						!			
Define	2				Measure		Analyze	Improve	Control
сто		Target	Err	Current Unit	Method	Deadline	Key Inputs	Changes	
Attractive to Wome	en								
Low bodyfat	≤	6%		8%	skinfold calipers	July-11	nutrient cycling, IF	PSMF on rest days	
Waist / chest	=	0.75	2%	0.78	tape measure	July-11	bodyfat, lifting	↓ BF%	
Waist / shoulder	=	0.62	2%	0.66	tape measure	July-11	bodyfat, lifting	↓ BF%, 个 OH Press	
Waist / hip	=	0.8	2%	0.83	tape measure	July-11	bodyfat, lifting	↓ BF%	
Waist / height	<	45%		0.44	tape measure	July-11	bodyfat		
Forearm / bicep (r)	=	0.83	2%	0.83	tape measure		lifting		
Thigh / hip (r)	=	0.60	2%	0.60	tape measure		lifting		
Calf / thigh (r)	=	0.67	2%	0.71	tape measure		lifting	↑ squat	
				1					
Longevity									
Resting heart rate	<	60		50.0 BPM	blood donation		nutrition (paleo)	-	→ paleo diet
Systolic BP	<	120		112.0 mmH	l blood donation		nutrition (paleo)	-	→ paleo diet
Diastolic BP	<	80		66.0 mmH	l blood donation		nutrition (paleo)	-	→ paleo diet
Cholesterol	<	200		185.0 mg/d	d blood donation		nutrition (paleo)	-	→ paleo diet
Hemoglobin	=	14.5	0.5	14.7 g/dl	blood donation		nutrition (paleo)	-	→ paleo diet
				1					
Strength									
Deadlift BW ratio	≥	2.5		2.37	lifting, scale	July-11	bodyfat, lifting	→ training, ↓ BF%	
Squat BW ratio	≥	2		1.90	lifting, scale	July-11	bodyfat, lifting	个 frequency, 个 flexibilty	
Bench BW ratio	≥	1.5		1.46	lifting, scale	July-11	bodyfat, lifting	$ ightarrow$ training, \downarrow BF%	
Chin BW Ratio	≥	1.5		1.52	lifting, scale	July-11	bodyfat, lifting	$ ightarrow$ training, \downarrow BF%	
Overhead BW ratio	≥	1		0.96	lifting, scale	July-11	bodyfat, lifting	→ training, ↓ BF%	

Outcomes

GOALS				I			1	I
Define				Measure	Analyze	Improve	Control	
сто		Target	Err	Curen Uni	t Method	Deadline Key Inputs	Changes	01 91 91 91 91 91 91 91 91 91 91 91 91 91
Attractive to Wom	en			27 27 28 20 20 20 20 20 20 20 20 20 20 20 20 20		01 01 01 01 01 01 01 01 01 01 01 01 01 0	140 140 140 140 140 140 140 140	551 502 503 503 503 503 503 504 504 504 504 504 504 504 504
Low bodyfat	4	6%		976	skirtold calipers	uly-11 nutrient cycling, IF	PSWF on rest days	
waist/chest	114444 214921	0.75	194	0.78	tape measure	July-11 bodyfat, lifting	J BF%	01 01 11 11 11 12 12 13 14 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16
Walst/shoulder	2000 10400	0.62			tape measure	July-11 bodyfat, lifting	J BF%, T OH Press	10 10 10 10 10 10 10 10 10 10 10 10 10 1
	213821 213821	0.8	2%	1 10.83		July-11 bodyfat, lifting	↓ BF%	10 10 10 10 10 10 10 10 10 10 10 10 10 1
wast / height	el ^{re}			Ü, da	tope messure	July-11 bodyfat		0
	00000		2%	10. 25.15	tape measure	The state of the s		10 10 10 10 10 10 10 10 10 10 10 10 10 1
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Longevity 					W	hat matters to me		
Resting heart rate	44°,	60		50.0 BPR				-> paleo diet
	45,	120		112.0 009	Haloed donation	inutrition (paleo)		-> paleo diet
	$\exists \xi_{k_{0}}^{d^{2}}$				H blood denster	nutrition (paleo)		-) palec diet
	$\exists l_{a_{0}}^{G}$	200		i 185.0 mg/	d blood denstion			-> paleo diet
riemogiokin	1000	1 11 12 12 13 13 13 13 13 13 13 13 13 13 13 13 13	0.5		blood donation	nutrition (paleo)	201	
Strength				a a				35
Deadlift BW ratio	2	2.5		2.37	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	July-11 bodyfat, lifting	→ training, ↓ BF%	
Squat BW ratio	3	2		1.90		uy-11 bodylat, ming	A frequency, A fiexibility	
Bund Bir raid	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	4 2"		1.46			e training J. BF%	100
Chin Evy Ratio	2	1 5		1.52		July-11 bodylat, iiding	e) training, J. 8F%	120 (120 (120 (120 (120 (120 (120 (120 (
Overhead BW ratio	æ			0.96			-) training J. BF%	100 100 100 100 100 100 100 100 100 100

'Critical to Quality'

GOALS								
Define				Measure		Analyze	Improve	Control
сто	Target	Err	Current Unit		Dealline	Key Imputs		
Attractive to Wome	n		100 100 100 100 100 100 100 100 100 100				20 20 20 20 20 20 20 20 20 20 20 20 20 2	1850 114 114 114 115 115
Low bodyfat	≤ 6%	6	196	skinfold callpers	July-11	nutrient cycling, l	F PSMF on rest days	
Waist / chest	= 0.75	5 2%	0.78	tape measure	July-11	bodyfat, lifting	J- 8 F%	### ### ### ### ### ### ### ###
Waist / shoulder	= 0.62	2 2%				8	ii .	#
Waist / hip	= 0.8		From 'N	/luscle & Fi	tness'	1979 & stud	dies on male att	tractiveness
Waist / height	< 45%							
Forearm / bicep (r)	= 0.83			inge mesert			88 84 91 101 101 101 101 101 101 101 101	51 11 11 11 11 11 11 11 11 11 11 11 11 1
Thigh / hip (r)	= 0.60			îcepe de literatere de l'especie			80 80 80 80 80 80 80 80 80 80 80 80 80 8	### ### ### ### ### ### ### ### ### ##
Calf / thigh (r)	= 0.67	2%	0.71	tape measure			T squat	## ## ## ## ## ## ## ## ##
			10 10 10 10 10 10 10 10 10 10 10 10 10 1				## 10	111 111 111 111 111 111 111 111
Longevity								
Resting heart rate	< 60	0	50.0 BPM	blood donation		nutrition (paleo)	15 10 10 10 10 10 10 10	-> paleo diet
Systolic BP	< 120	0			. .	141		
Diastolic BP	< 80	0	Primary	<i>indicators</i>	of hea	lith		
Cholesterol	< 200	0	5115			9.0		10 20 20 20 20 20 20 20 20 20 20 20 20 20
Hemoglobin	= 14.5	5 0.5	i 14.7 g/dl	blood donation		nutrition (paleo)	## 4#G	tsib aslaq 🤄
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Strength								
Deadlift BW ratio	≥ 2.5	5	2.37	Ming scale	July-11	bodyfat, lifting	-> training 4 of%	88 84 11 11 11 11 11 11 11 11 11
Squat BW ratio		2						
Bench BW ratio	≥ 1.5		Fundan	nental strer	igth to	bodyweigh:	t ratios	
Chin BW Ratio	≥ 1.5							#
Overhead BW ratio	≥ 1	l	0.96	iiting, scale	July-11	bodyfat, lifting	l) training J. 86%	184 184 184 185

Measure

GOALS										
Define						Measure		Analyze	Improve	Control
сто		Target	Err	Current	Unit	Method	Deadline		Changes	
Attractive to Wom	nen							TO COMMITTEE OF THE COM	40 / 10 / 10 / 10 / 10 / 10 / 10 / 10 /	
Low bodyfat	≤	6%		8%		skinfold calipers	July-11	nutrient cycling, IF	PSMF on rest days	
Waist / chest	=	0.75	2%	0.78		tape measure	July-11	bodyfat, lifting		
Waist / shoulder	=	0.62	2%	0.66		tape measure	July-11	bodyfat, lifting	↓BF%, ↑ OH Press	
Waist / hip	=	0.8	2%	0.83		tape measure	July-11	bodyfat, lifting		
Waist / height	<	45%		0.44		tape measure	July-11			
Forearm / bicep (r)	=	0.83	2%	0.83		tape measure			50 10 10 10 10 10 10 10	
Thigh / hip (r)	=	0.60	2%	0.60		tape measure			02 12 12 12 12 12 12 12	
Calf / thigh (r)	=	0.67	2%	0.71		tape measure		** ** ** ** ** ** ** ** ** ** ** ** **	1 squat	
Longevity										
Resting heart rate	<	60		50.0	вРМ	blood donation		nutrition (paleo)	vie	-> paleo diet
Systolic BP	<	120		112.0	mm⊦	blood donation		rutrition (paleo)	441 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	→ paleo diet
Diastolic BP	<	80		66.0	mm⊦	blood donation		rutrition (paleo)	00 00 00 00 00 00 00 00	🤌 paleo diet
Cholesterol	<	200		185.0	mg/c	blood donation		frutrition (paleo)	en la companya de la	-> paleo diet
Hemoglobin	=	14.5	0.5	14.7	g/dl	blood donation		nutrition (paleo)		-) palendiet
Strength										
Deadlift BW ratio	≥	2.5		2.37		lifting, scale	July-11	bodyfat, lifting	🤌 training, 👃 BF%	
Squat BW ratio	≥	2		1.90		lifting, scale	July-11	bodyfat, lifting	Threquency, Thilexibility	
Bench BW ratio	≥	1.5		1.46		lifting, scale	July-11	bodyfat, lifting	d training & BF%	
Chin BW Ratio	≥	1.5		1.52		lifting, scale	July-11	bodyfat, lifting	y training J. BF%	
Overhead BW ratio	≥	1		0.96		lifting, scale	July-11	bodyfat, lifting) training 1 BF%	

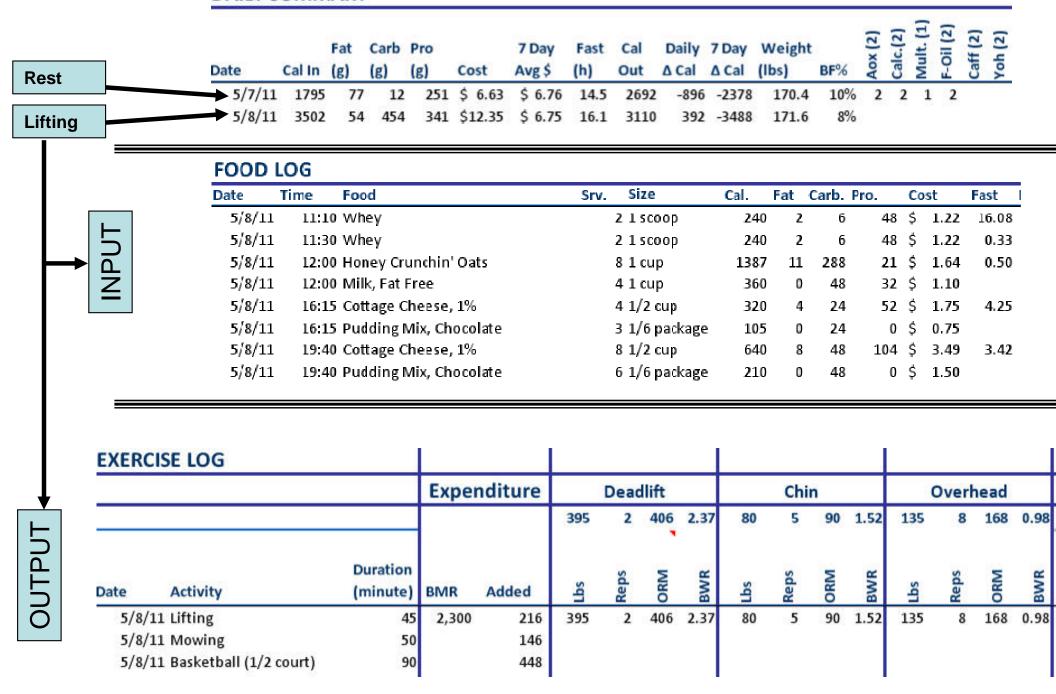
Analyze

GOALS									
Define					Measure		Δnalyze	Improve	Control
сто		arget	Err	Current Un	t Method		Key Inputs	Changes	
Attractive to Wome	n			100 100 100 100 100 100 100 100 100 100					601 602 603 603 603 603 603 603 603 603 603 603
Low bodyfat	≤	676		170	skinfold callp	PF FF	nutrient cycling, IF	PSMF on rest days	
Waist / chest	=	0.75	2%	0.78	tape measure	Julyali	bodyfat, lifting		
Waist / shoulder	=	()				25 20 21 21	bodyfat, lifting	1 DEM, TON Press	502 502 503 503 503 503 503 503 503 503
Waist / hip	=			'Le	angains' n	nethod	bodyfat, lifting	Section of the sectio	100 100 100 100 100 100 100 100 100 100
Waist / height	<	4					bodyfat		582 575 575 575 575 575 575 575 575 575 57
Forearm / bicep (r)	=	0.83	2%	9.63	tape measure		lifting		
Thigh / hip (r)	=	0.60	2%	0.60	lape messire		lifting		582 575 575 575 575 575 575 575 575 575 57
Calf / thigh (r)	=	0.67	2%	0.71	tape measure		lifting		11000000000000000000000000000000000000
Longevity				19					500 Hall Hall Hall Hall Hall Hall Hall Ha
Resting heart rate	<	60		50.0 SP	M blood donatio	ii	nutrition (paleo)		7 paleo diet
Systolic BP	<	720		1111A man	altoneth basis lis	1 2/1	nutrition (paleo)		🕂 paleo diet
Diastolic BP	<				(Dalas) is	.4	nutrition (paleo)	-049	le paleo diet
Cholesterol	<	2			'Paleo' ni	atrition	nutrition (paleo)	- 404	→ paleo diet
Hemoglobin	=	1 top.,	for a set				nutrition (paleo)		
Strength				1					14 14 14 14 14 14 14 14 14 14 14 14 14 1
Deadlift BW ratio	≥	15		2.37	isting, scale] 17-17	bodyfat, lifting	-> training, J. BF%	
Squat BW ratio	≥						bodyfat, lifting		522 522 523 524 525 525 525 525 525 525 525 525 525
Bench BW ratio	≥			Reverse	pyramid tı	raining	bodyfat, lifting	9 1:31:1113 J. 12:76	
Chin BW Ratio	≥			:Farancarananananananananan	2,27		bodyfat, lifting	e training, J. BF%	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Overhead BW ratio	≥	*B		0.95			bodyfat, lifting	→ training, J. 8F%	000 000 000 000 000 000 000 000 000 00

Methods

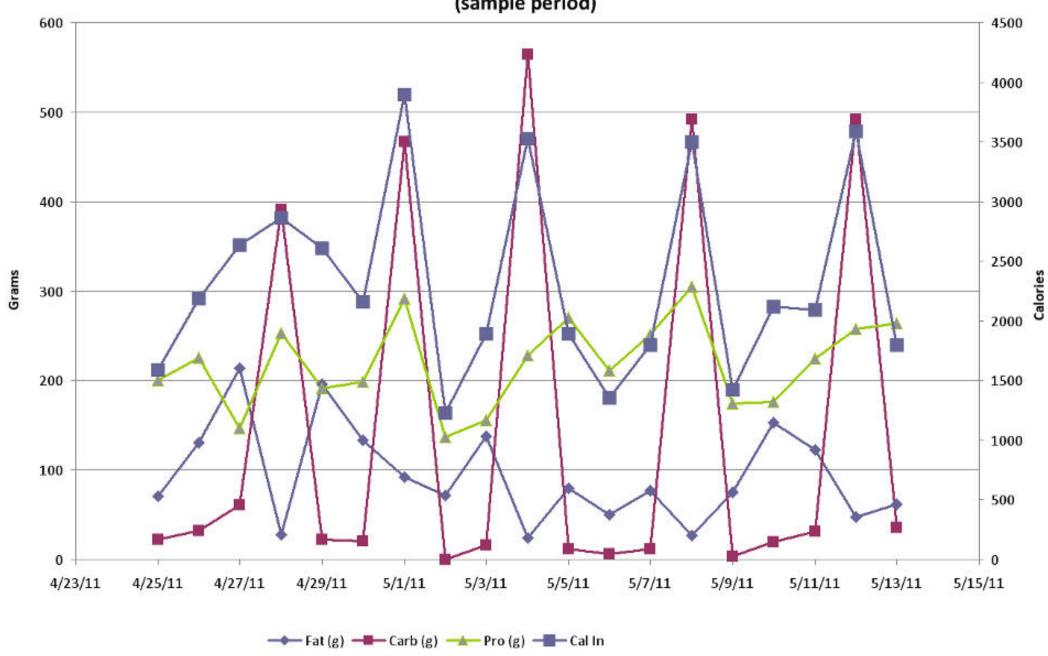
- 'Leangains' method
 - High calorie, high carb on lifting days
 - Low calorie, low carb on rest day
 - High protein all days
 - 16 hr fast + 8 hr feed
- 'Paleo' nutrition
 - Eat like a caveman
 - No grains, sugar, trans fats, etc.
 - Limited dairy, alcohol, fruit, etc.
- Reverse pyramid training
 - Start heavy (3 rep), finish light (8-10 rep)

DAILY SUMMARY



Daily Nutrient Intake

(sample period)



Weight and Caloric Balance



Cost Efficiency

(Finance Goal)

FOOD CHOICES								450	30	
Туре	Brand	Srvg Size	Cal	Fat	Carb	Pro	\$ / serving	Cal/\$	Pro/\$	Pro/Fat
Brussel Sprouts	Giant	1 sprout	7.5	j.	0 1.3	0.5	\$ 0.0333	225	15	
Casein, Choc	Optimum Nutrition	1 scoop	120		1	3 24	\$ 0.7994	150	30	24.00
Cheerios	General Mills	1 cup	100		2 20) 3	\$ 0.2494	401	12	
Cheerios, Honey Nut	General Mills	1 cup	146.7		2 29.3	3 2.7	\$ 0.3333	440	8	É
Chicken Breast, Skinless	Giant	1 gram	1.65	0.0	4 (0.31	\$ 0.0078	212	40	7.75
Cottage Cheese, 1%	Giant	1/2 cup	80		1 (5 13	\$ 0.4363	183	30	13.00
Egg, Large A	Giant	1 egg	70	4.	5	L 6	\$ 0.1772	395	34	1.33
Egg Substitute	Better'n Eggs	1/4 cup	30		0 :	L 6	\$ 0.2681	112	22	
Hash Browns (Baked)	Giant	1 gram	0.82		0 0.19	0.02	\$ 0.0032	₹ 257	7	
Honey Crunchin' Oats	Giant	1 cup	173.3	1.	3 36.0	2.7	\$ 0.2051	845	13	
Hot Dogs	Nathans	1 Link	170	1	5	. 7	\$ 0.3750	453	19	0.47

Improve & Control

GOALS									
Defin	e				Measure		Analyze	Improve	Control
сто		Target	Err	Current Unit	Method	Deadline	Key Inputs	Changes	
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DMAIC Fitness Conclusions

- Forces total consciousness
 - No lying (e.g. food, progress)
- Objectification feels good
 - Like getting a good report card every day
- Identifies an ending point
 - End improvement, start control phase

Next Project: Hedonometer

- A device to gauge happiness
- Direct
 - Biochemical: Serotonin, dopamine, oxytocin
 - Brain scanning, MRI
- Indirect
 - Day reconstruction method (journal)
 - 'Quality of Life' indicators
 - % completion of desired life outcomes
 - Mood journal