### PIVOTING A COMPANY TOWARDS GITOPS AND CONTINUOUS DELIVERY

A TECHNICAL PRACTICES COACH'S TALE FOR THE MISBEGOTTEN









#### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





#### DEVELOPMENT ENVIRONMENTS







#### DEVELOPMENT INFRASTRUCTURE





#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











### PRODUCTION INFRASTRUCTURE











### DEVELOPING A LEARNING ORGANIZATION









#### THE TALE FOR THE MISBEGOTTEN





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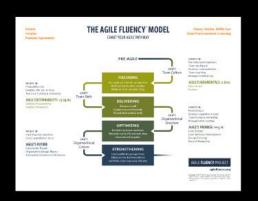
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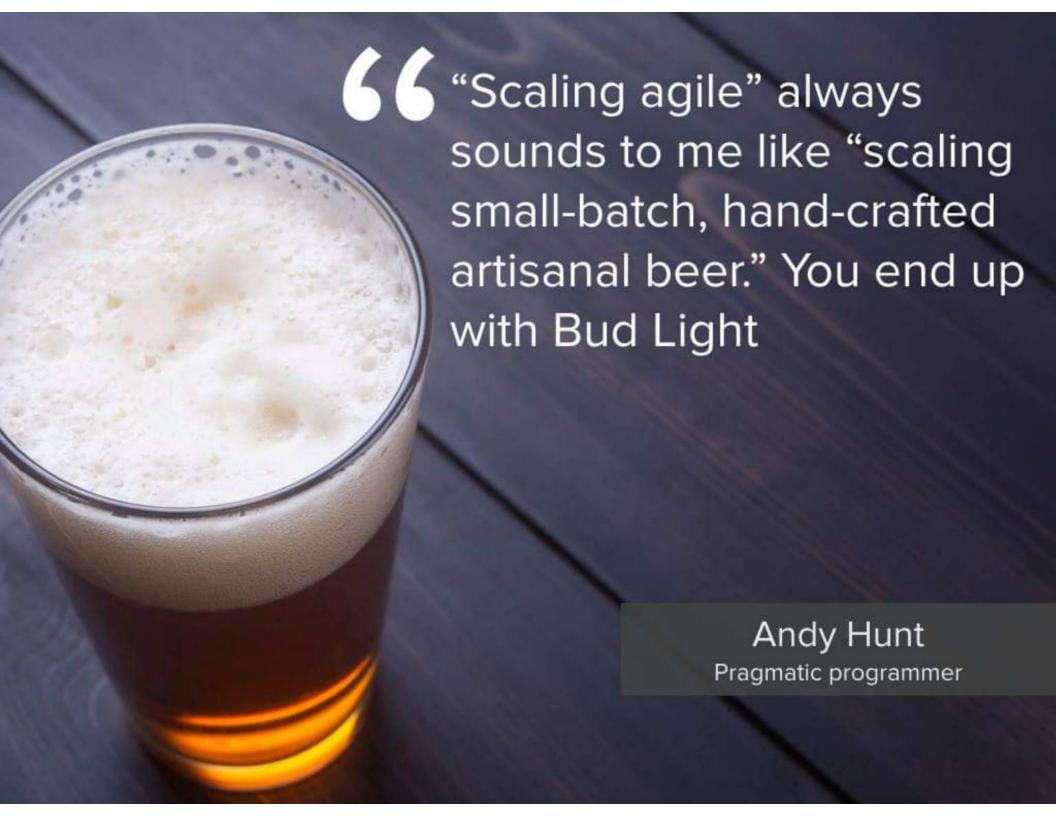
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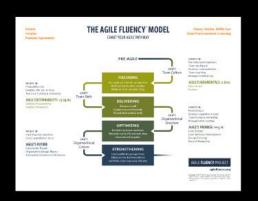
Fluency: Routine, Skillful Ease Comes From Investment In Learning



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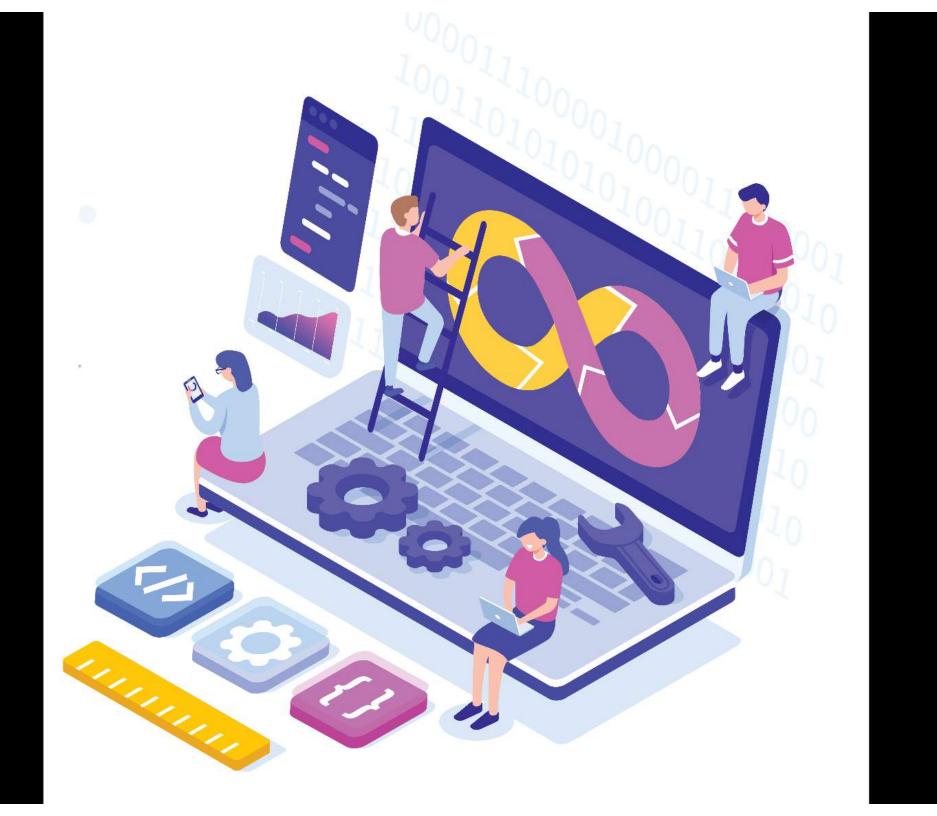


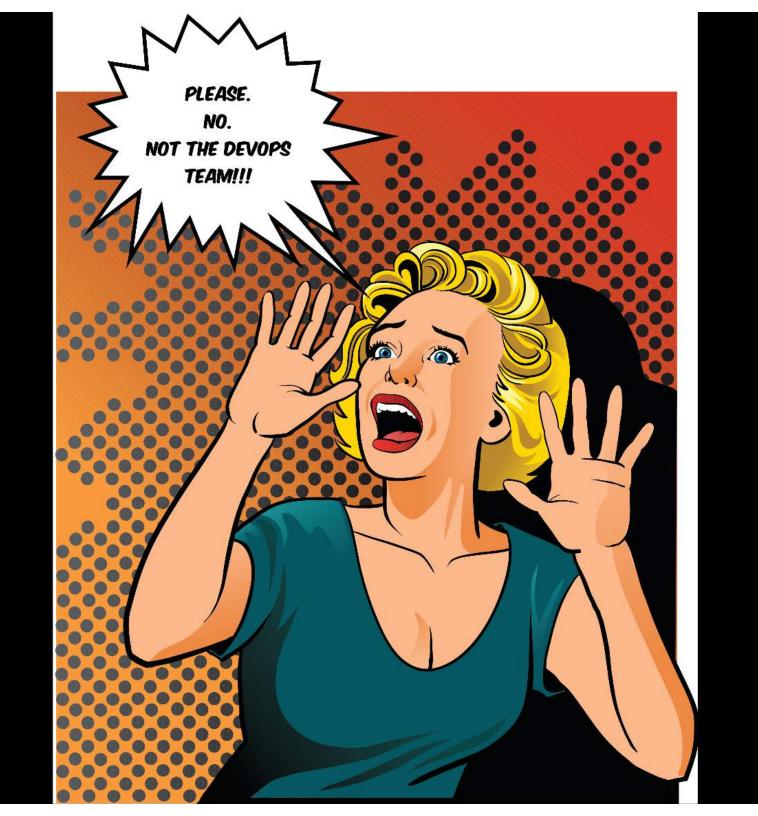
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INCREASED COLLABORATION BETWEEN DEVELOPMENT AND OPERATIONS, BROUGHT ABOUT BECAUSE OF THE RECOGNITION OF A SHARED RESPONSIBILITY TO EXCITE AND DELIGHT THE ORGANIZATION'S CUSTOMERS.

AUTONOMOUS AND SELF-RELIANT TEAMS TO ALLOW WORK TO PROGRESS WITHOUT THE LEAN WASTES RELATED TO COORDINATION, EXCESSIVE PLANNING, WAITING, DEFECTS, INVENTORY, MOTION, ETC.

BUILDING QUALITY INTO THE PROCESS, RATHER THAN TRYING TEST IT INTO THE PRODUCT BY "SHIFTING TESTING LEFT" AS FAR AS POSSIBLE.

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ESTABLISHING REGULAR DOWN RETWEEN COSTOMERS AND DEVELOPES, DEVELOPES AND DEBATIONS, OPERATIONS AND AUDITARICALISTICS, ETC. TO HELP PROBABLE CONTINUOUS IMPROVIDURAL IN A SEATMONE DECANDISATION.

UNDPROCESSABLE AND PROCEEDING THE VIEW CHARTY MASSE TREATING DEVELOPMENT OF EVERYTHING, AS COMPASTED WITH EXCENSIVE REQUIREMENTS/ ANALYSIS/RESIGN/COGE/TEST PROTECT PLANS THAT ARE COMMONEY USED, REMODELS OF ANY AGUE SOFMOTHS WENDS AND TOOLS USED TO PERFESS THEM

MICCIDIANT, REVEN IS NOT AMOUT HATING A LOT OF ENTINENT "ENTERMISE BEVEN" TOOLS HAVE ON VERSON MORESES OF HOW MODIFIED MALKELY. THINKS WITH BE WITH THEIR FLYTHISTAY TOOL AND THEN TO HOLE. TO MAKE ALL THE TWO IS WORK TOUSTHER SAMERING.







#### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





#### DEVELOPMENT ENVIRONMENTS







#### DEVELOPMENT INFRASTRUCTURE





#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











### PRODUCTION INFRASTRUCTURE











### DEVELOPING A LEARNING ORGANIZATION









#### THE TALE FOR THE MISBEGOTTEN





# ON REQUIREMENTS GATHERING

#### WE'RE AGILE. WE DON'T NEED NO STINKING REQUIREMENTS!



/THE THEALERS OF THE STREAM MADRIE, WARRIER BROTHERS, 19481

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[THE TREASURE OF THE SIERRA MADRE, WARNER BROTHERS, 1948]

STEVE MCCONNELL, IN CODE COMPLETE, STATES: "THE FIRST PREREQUISITE YOU NEED TO FULFILL BEFORE BEGINNING CONSTRUCTION IS A CLEAR STATEMENT OF THE PROBLEM THE SYSTEM IS SUPPOSED TO SOLVE."

BUT WE'RE AGILE! DO WE NEED TO GATHER REQUIREMENTS?

- · SADLY, PROBABLY SO.
- IDEALLY, WE SHOULD EMPATHIZE SO MUCH WITH OUR CUSTOMERS THAT WE KNOW WHAT THEY NEED.
- BUT, IT'S USUALLY NOT THAT SIMPLE. ESPECIALLY WHEN YOU'RE NOT THE ONLY DEVELOPER WHO WORKS FOR THEIR CUSTOMER.

WE ACTUALLY HAVE TWO WORRIES.

- NOT DOING WHAT THE USER WANTS.
- DOING WHAT THE USER WANTS.
- WHAT?

THE ANSWER IS AT THE INTERSECTION OF CURSE OF KNOWLEDGE FROM THE USER'S STANDPOINT VERSUS DOING ONLY WHAT THE USER ASKS FOR. [PEANUT BUTTER CHALLENGE AND FORD'S "QUOTE" OF "IF I ASKED PEOPLE WHAT THEY WANTED, IT WAS FASTER HORSES." (INNOVATION OCCURS WITH TRUE EMPATHY OF THE CUSTOMER'S NEEDS)]



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WHY? I PUT THE BLAME SQUARELY ON PEOPLE "REVERTING TO FORM" WHEN STRESSED, AND PERFORMING COMMITMENT DRIVEN DEVELOPMENT. [SIDE STORY OF CHICAGO INSPIRATION FOR THIS]

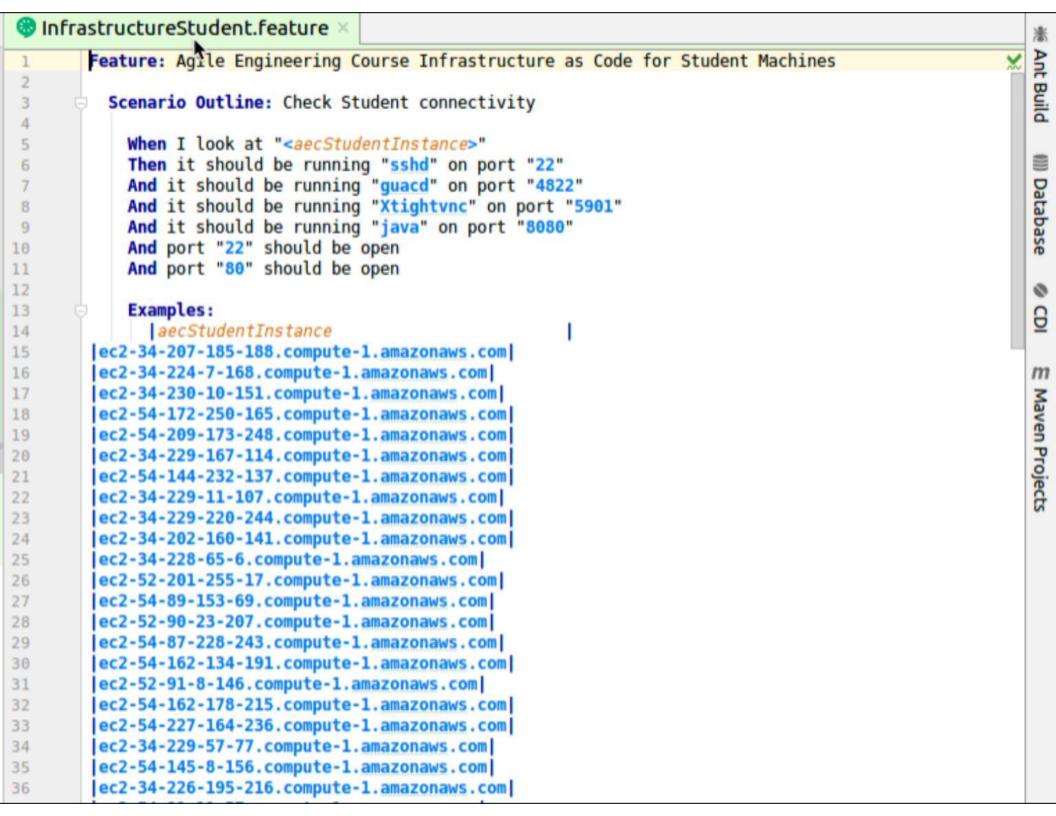
On June 19 and 20, 2017, many flights were cancelled at Arizona's Phoenix Sky Harbor airport because it was "too hot." Really? The engineering reason has to do with the fact that the amount of lift generated by a wing is related to the air that it flies in. When the air becomes "thin" because of heat and humidity (water vapor is less dense than air: that's why clouds tend to float above us), they produce less lift, and require higher speeds through the air to produce the lift needed to allow the airplanes to take off. Higher speeds require longer runways, and at a certain point, the heat is just too high to have enough safety on any particular runway to allow a safe depature.

With Global Warming becoming all too real, pliots need to keep their eye on the density altitude (a measure of what the heat and humidity would translate into for "standard" atmospheric conditions) as they evaluate how much runway is needed for a safe takeoff and landing. If you're interested in the details of how density altitude is calculated, take a look at https://en.wikipedia.org/wiki/Density altitude.

There are many online resources that pilots can use to calculate density altitude. We'd like to test them!

#### Examples:

1	elevation	elevationUnits	temperature	temperatureUnits	altimeter	altimeterUnits	dewPoint	dewPoil
	182	feet	80	F	30.02	in Hg	70	F
- 1	182	feet	60	F	29.95	in Hg	40	F
	30	meters	25	C	1000	hPa	20	C



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THE ANCIENT FORMULA OF "ANALYZE, DESIGN, DEVELOP, AND TEST" (WATERFALL) IS NOW CLOAKED IN MODERN AGILE SOUNDING WORDS. "PRODUCT INCREMENT". "SPRINT OBJECTIVE". "STORY."

WE STILL YEARN TO LOOK FOR COMPLETE SOLUTIONS TO NEEDS WAY BEFORE WE REALLY AND DEEPLY UNDERSTAND THE REAL NEEDS.

AN AGILE APPROACH WOULD BE TO DO THE SIMPLEST THING POSSIBLE IN THE DIRECTION OF WHERE WE THINK A SOLUTION LAYS. HAVE THE CUSTOMER TEST THAT TO REINFORCE OUR HYPOTHESIS OF WHAT A SOLUTION LOOKS LIKE. AND ITERATIVELY (NOT INCREMENTALLY) PUT FORWARD A SOLUTION.

IN COMMITMENT DRIVEN DEVELOPMENT, WE ASK PEOPLE TO ESTIMATE, HOPEFULLY WITH HIGH ACCURACY, THE COST FOR SOMETHING, IN THE MISGUIDED HOPE THAT WE CAN OPTIMIZE THE EFFORT BY SCALING ACROSS THE ORGANIZATIONAL SILOS SO EVERYONE IS DOING THEIR LITTLE PART IN MAKING THE SOLUTION HAPPEN.

BUT BY DOING SO, WE MISS THE BIG PICTURE BY FORGETTING THAT WE DON'T REALLY KNOW WHAT THE SOLUTION IS. WE PROBABLY DON'T EVEN KNOW WHAT THE PROBLEM REALLY IS!

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# WHAT ABOUT PLANNING?

#### WHY DO ORGANIZATIONS LIKE TO PLAN SO MUCH?



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S FILL TRAT STITMATELY, THE MED TO PLAN IS ROOMD WITH RESAMBLIZATIONAL MUTREST IN THE ROOM WITE

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#### PLANNING FOR FIXING TIME - THE HARDENING SPRINTS

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NOT IN THE MEANAGEMENT ONE! THEN ARE TREATED FROM THAT HERE THE AREA THE ON THE REPORT OF THE REPORT OF THE PROPERTY OF THE PR

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#### LEAN WASTES AND THE MEETING CULTURE



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#### HOW TO TEACH TEAMS THAT THEY CAN ACT BY THEMSELVES



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NE ME SALE IN THE PROJECT OF SEEDIN BINN THE INSCANCE WITH "STEED". WE MEET AND THE MEST THE EXPECTS ON THE DAMA TO GENERAL DEVICENCE.

### WHY DO ORGANIZATIONS LIKE TO PLAN SO MUCH?





I REALLY WISH I KNEW.

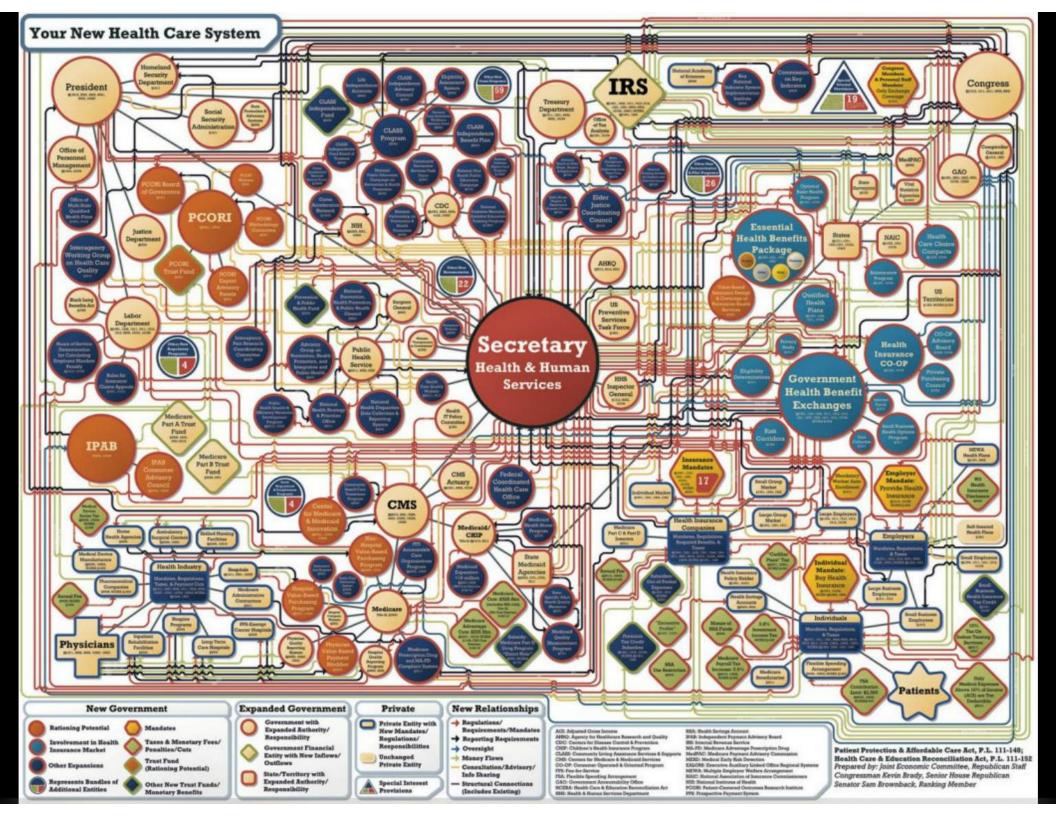
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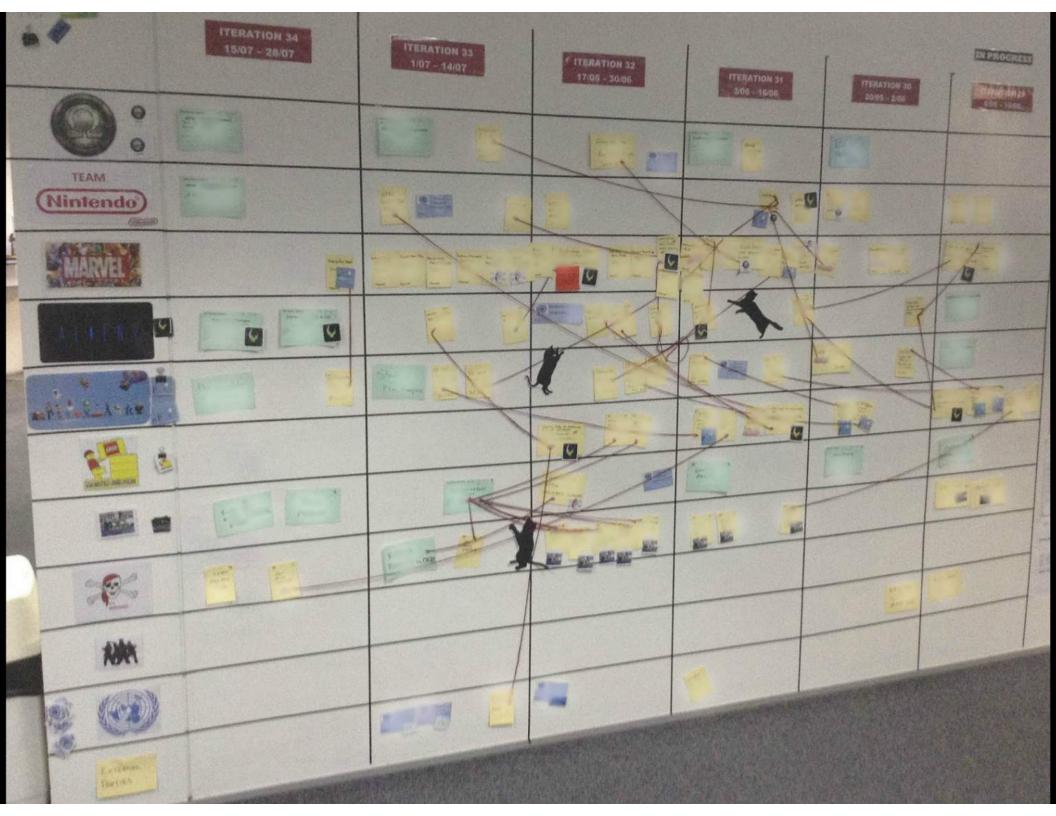
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### PLANNING FOR FIXING TIME - THE HARDENING SPRINTS

USUALLY, DEVELOPERS IN ORGANIZATIONS I START TO COACH ARE PUT AT A GREAT DISTANCE FROM THEIR ULTIMATE CUSTOMERS. THEY HAVE "PRODUCT OWNERS", "PROXY PRODUCT OWNERS", AND A PLETHORA OF OTHER WORDS THAT ARE SUPPOSED TO MEAN THAT THESE PEOPLE UNDERSTAND THE PRODUCTS.

MOST OF THE ORGANIZATIONS DON'T EVEN USE "PRODUCT" PEOPLE TO STAFF THAT ROLE! THEY USE "IT" OR "DEVELOPMENT" STAFF. IMHO, THESE ARE USUALLY "PROJECT MANAGERS" WITH ANOTHER NAME.

AS A COACH, I FIND MYSELF CONSTANTLY COACHING TEAMS AND ORGANIZATIONS ON THIS TOPIC. THEY CONSTANTLY TELL ME THAT "WE CAN'T RELEASE A STORY THAT DOESN'T HAVE ALL OF THESE FEATURES, BECAUSE THERE IS NO VALUE TO OUR CUSTOMER WITHOUT EVERYTHING BEING PRESENT".

THEY FORGET THAT THE VALUE IS IN AVOIDING LEAN WASTES FOR INVENTORY, WAITING, OVER PRODUCTION, OVER PROCESSING, AND DEFECTS, AS THOSE SORTS OF THINGS CONSTANTLY OCCUR WITH THE GRAND PLANS FOR GETTING A PROJECT DONE.

IN FACT, I FIND THAT CLIENTS ARE PERFECTLY CONTENT ON HAVING 6 SPRINT RELEASES (12 WEEKS), WITH THE FINAL 2 SPRINTS RESERVED FOR "HARDENING". THAT'S A 33% PENALTY TO ALLOW FOR THE DEFECTS AND BUGS THAT OCCUR DUE TO LATE INTEGRATION BREAKAGE. AND SOME ORGANIZATIONS ADD IN ANOTHER SPRINT FOR PLANNING A RELEASE.

THAT'S JUST UNACCEPTABLE WASTE.

### LEAN WASTES AND THE MEETING CULTURE



AND SPEAKING OF LEAN WASTES, I STILL HAVE AN ENORMOUS PROBLEM ON MY HANDS WITH A MEETING CULTURE.

I HAVE A CLIENT WHO IS NOT UNLIKE OTHER MODERN BUSINESSES. THEY LOVE TO MEET. AND IF THEY CAN'T MEET IN PERSON, THEY LOVE THEIR WEBEXS.



I WORK CLOSELY WITH THE LEADER/MANAGER OF ALL DEVELOPMENT FOR THE ORGANIZATION. A GUY WHO HAS OVER 150 PEOPLE WHO REPORT THROUGH HIM. I LIKE TO KID HIM THAT HIS CALENDAR LOOKS LIKE A DRIVEWAY MADE OUT OF MULTICOLORED PAVER STONES. IT'S MOSTLY MEETINGS WHERE PEOPLE ARE REPORTING ON PROGRESS AND DECIDING ON "NEXT STEPS."

THERE ARE SEVERAL CLEAR AND PRESENT DANGERS WITH THIS:

- GROUP DECISIONS ARE USUALLY MEDIOCRE AT BEST.
- FEAR IS KEEPING OTHERS FROM MAKING DECISIONS UNLESS THIS MANAGER APPROVES.
- DECISIONS ARE BEING MADE LATE, BECAUSE IT IS SO HARD TO SCHEDULE MEETINGS.
- PEOPLE CONTINUE TO THINK THAT THEIR JOB IS TO BE IN MEETINGS, RATHER THAN DO WORK. IN FACT, I SEE MANY REASONS TO BELIEVE THAT PEOPLE SEE THE MEETINGS AS WHEN WORK GETS DONE.

WE NEED TO FIGHT THIS. BUT TO MAKE THAT HAPPEN, I NEED TO GET THE LEADERS/MANAGERS TO CHANGE THEIR WAYS, AS PEOPLE LOOK TO THEIR LEADERS TO SEE HOW TO ACT.



2011	Sunday, Apr 10	Monday, Apr 11	Tuesday, Apr 12	Wednesday, Apr 13	Thursday, Apr 14	Friday, Apr 15
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### LEAN WASTES AND THE MEETING CULTURE



AND SPEAKING OF LEAN WASTES, I STILL HAVE AN ENORMOUS PROBLEM ON MY HANDS WITH A MEETING CULTURE.

I HAVE A CLIENT WHO IS NOT UNLIKE OTHER MODERN BUSINESSES. THEY LOVE TO MEET. AND IF THEY CAN'T MEET IN PERSON, THEY LOVE THEIR WEBEXS.



I WORK CLOSELY WITH THE LEADER/MANAGER OF ALL DEVELOPMENT FOR THE ORGANIZATION. A GUY WHO HAS OVER 150 PEOPLE WHO REPORT THROUGH HIM. I LIKE TO KID HIM THAT HIS CALENDAR LOOKS LIKE A DRIVEWAY MADE OUT OF MULTICOLORED PAVER STONES. IT'S MOSTLY MEETINGS WHERE PEOPLE ARE REPORTING ON PROGRESS AND DECIDING ON "NEXT STEPS."

THERE ARE SEVERAL CLEAR AND PRESENT DANGERS WITH THIS:

- GROUP DECISIONS ARE USUALLY MEDIOCRE AT BEST.
- FEAR IS KEEPING OTHERS FROM MAKING DECISIONS UNLESS THIS MANAGER APPROVES.
- DECISIONS ARE BEING MADE LATE, BECAUSE IT IS SO HARD TO SCHEDULE MEETINGS.
- PEOPLE CONTINUE TO THINK THAT THEIR JOB IS TO BE IN MEETINGS, RATHER THAN DO WORK. IN FACT, I SEE MANY REASONS TO BELIEVE THAT PEOPLE SEE THE MEETINGS AS WHEN WORK GETS DONE.

WE NEED TO FIGHT THIS. BUT TO MAKE THAT HAPPEN, I NEED TO GET THE LEADERS/MANAGERS TO CHANGE THEIR WAYS, AS PEOPLE LOOK TO THEIR LEADERS TO SEE HOW TO ACT.

### HOW TO TEACH TEAMS THAT THEY CAN ACT BY THEMSELVES



ONE THING THAT I'M TRYING TO DO TO HELP BREAK DOWN THESE ISSUES IN REQUIREMENTS AND PLANNING IS TO ENGAGE TEAMS IN HACKATHON EVENTS. WE JUST DID ONE IN JANUARY FOR AN ORGANIZATIONAL OUTPOST IN VIRGINIA.

THE EVENT WAS STARTED BY ASKING PEOPLE TO SIGN UP FOR A THREE DAY EVENT TO BE HELD OUT OF THE OFFICE.

ANYONE COULD SIGN UP. NO EXPERIENCE IN PROGRAMMING, ELECTRICAL ENGINEERING, NUCLEAR PHYSICS, OR ANIMAL HUSBANDRY REQUIRED.



BUT ONCE YOU SIGNED UP, YOU WERE FORBIDDEN FROM DOING YOUR NORMAL OFFICE WORK. NO EMAIL. NO WEBEX. NO PHONE CALLS.

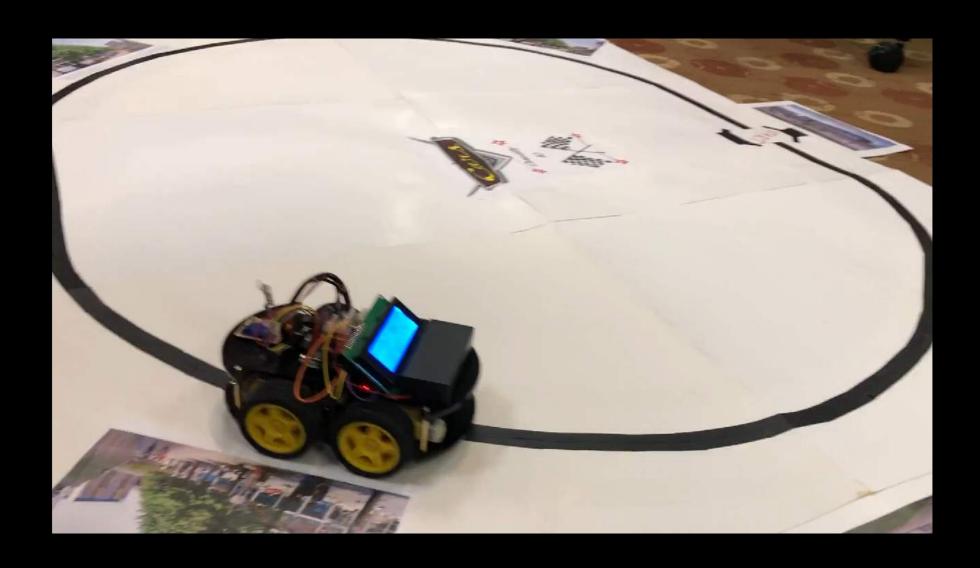


PEOPLE WERE RANDOMLY ASSIGNED TO TEAMS, TO ENSURE THAT WHATEVER TALENT WAS AROUND WAS EQUALLY SPREAD AROUND.

PEOPLE WERE GIVEN ARDUINO POWERED ROBOT CAR KITS, AND EXTRA SENSORS AND SHIELDS (SUCH AS LCD DISPLAYS) WERE AVAILABLE.

PARTICIPANTS WERE SHOWN SOME DEMOS OF WHAT THE CAR COULD DO, AND TOLD TO PITCH A PRODUCT BASED ON WHAT THEY HAD AVAILABLE AND WOULD DEMO ON THE THIRD DAY.







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## THUS FAR, RESULTS ARE GOOD!

SOME TEAMS REVERTED TO FORM, WRITING REQUIREMENTS DOWN AS SYSTEM REQUIREMENTS, RATHER THAN A MORE TRADITIONAL PRODUCT PITCH. ONE TEAM EVEN HAD MEMBER THAT INSISTED ON A POWERPOINT DRIVEN DEMO THAT JUST ATE AWAY THE TIME.

SOME TEAMS HAD NO PROGRAMMING EXPERIENCE PER SE. I WOULD NOT "GIVE THEM PROGRAMMING RESOURCES" THAT THEY REQUESTED. I TOLD THEM THAT I HAD FAITH THAT THEY COULD COMPETE EQUALLY WITH EVERYONE ELSE, AND THAT THEY JUST HAD TO FIGURE IT OUT.

THE TEAMS LEARNED A LOT ABOUT ARDUINO PROGRAMMING AND SIMPLE REALTIME SYSTEMS.

THEY LEARNED THAT QUICK "WHAT DO YOU LEARN, WHAT SURPRISED YOU, AND WHAT WOULD YOU DO DIFFERENTLY" RETROSPECTIVES HELPED SPREAD KNOWLEDGE.

THEY LEARNED TO RELY ON THEMSELVES AND THEIR ABILITY TO SEEK OUT THOSE THAT COULD HELP THEM.

THEY ALSO LEARNED THAT JUST BECAUSE A WIRE FITS ON A HEADER DOES NOT MEAN THAT THE WIRING IS CORRECT. ONE TEAM FRIED A FEW BOARDS. BUT THEY WERE NOT GREETED WITH "LESSONS LEARNED" WHIPPINGS, BUT WITH KNOWLEDGE LEARNED (THE HARD WAY). WE CELEBRATED FAILURE!!

WE ARE SILL IN THE PROCESS OF SEEING HOW THE MESSAGES WILL "STICK". WE ARE ALSO TAKING THIS EXERCISE ON THE ROAD TO OTHER LOCATIONS.

# WHAT ABOUT PLANNING?

#### WHY DO ORGANIZATIONS LIKE TO PLAN SO MUCH?



LOCALITATIVE LOGIC

SECANDATION; SEE: D'YEREN, MENERATE AUTRI MEDICH EFFERWORK. TRYYDRON ON WRENTON AND OUT OF LIKE IT.

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#### PLANNING FOR FIXING TIME - THE HARDENING SPRINTS

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#### LEAN WASTES AND THE MEETING CULTURE



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#### HOW TO TEACH TEAMS THAT THEY CAN ACT BY THEMSELVES



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### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





#### DEVELOPMENT ENVIRONMENTS







#### DEVELOPMENT INFRASTRUCTURE





#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











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### DEVELOPING A LEARNING ORGANIZATION









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# DEVELOPMENT ENVIRONMENTS

#### THE "CHEAPER BY OFFSHORING IT" SYNDRONE



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### THE "CHEAPER BY OFFSHORING IT" SYNDRONE







ABOUT SIX YEARS AGO THERE WAS A BIG DESIRE ON THE PART OF MY CURRENT CLIENT TO USE OFFSHORE DEVELOPMENT TALENT.

THE CLIENT IS LOCATED IN MANHATTAN, WHERE IT IS HARD AND COSTLY TO HIRE GOOD QUALIFIED CANDIDATES.

THE CIO AT THE TIME CONSULTED ME TO SEE WHAT HE SHOULD DO IN TRYING TO SCALE UP HIS DEVELOPMENT STAFF TO A MUCH LARGER CAPACITY.

AS I RECALL, HE WANTED TO DOUBLE THE SIZE OF HIS DEVELOPMENT STAFF IN A PERIOD OF A FEW WEEKS.

HE WANTED TO DO THIS BY CONTRACTING WITH AN OUTSOURCING FIRM IN INDIA, AND PAY PENNIES ON THE DOLLAR COMPARED TO HIS COSTS FOR NEW YORK LABOR.

HE WANTED TO MANAGE THEM FROM NEW YORK AND DO THE WORK OFFSHORE.

### ARE SPECIALIZED SILOS THE WAY TO GO?



I COUNSELED HIM THAT BRINGING ON MORE PEOPLE WAS PRECISELY THE WRONG THING TO DO.

EVEN RESORTING TO "THE MYTHICAL MAN MONTH" AND THE TEACHINGS THAT ADDING MORE PEOPLE TO A LATE PROJECT WILL ONLY MAKE IT LATER DIDN'T RING TRUE TO HIM.

I COUNSELED HIM TO HIRE A HANDFUL OF REALLY TALENTED DEVELOPERS. STEAL THEM FROM GOOGLE. THEY WOULD EACH MAKE MORE MONEY THAN HE WAS MAKING (WHICH WAS CONSIDERABLE), BUT THE TOTAL WAS FAR LESS THAN THE MINIONS HE WANTED TO HIRE AT BARGAIN RATES FROM INDIA.

THE CIOS WAY OF ORGANIZATION WAS TO SILO DEVELOPMENT INTO COMPONENT TEAMS, AND HAVE COMPLETELY SEPARATE QA TEAMS (AGAIN, FROM INDIA). HE FELT THAT A "SEPARATION OF CHURCH AND STATE" WAS THE WAY TO QUALITY.

## HOW ABOUT JUST A FEW OF JUST THE BEST?



In the last 7 days
40 developers have made
1076 commits resulting in
577 deploys to 86 projects

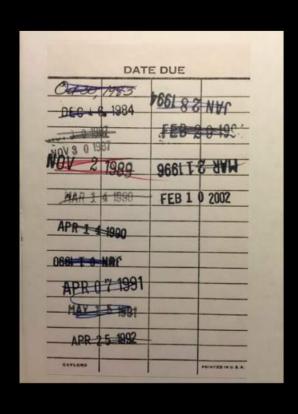
MY METHOD FOR ORGANIZING THE DEVLOPMENT ENVIRONMENT WAS TO HAVE JUST A FEW TEAMS.

THEY WOULD BE PRESENT ON-SITE, KEPT SMALL, AND BE COMPLETELY CROSS FUNCTIONAL.

EVERYTHING FROM REQUIREMENTS TO TESTING TO DEVELOPMENT WOULD BE DONE AT AN AUTONOMOUS TEAM LEVEL.

THIS WAS VERY MUCH THE CONCEPT OF "PROGRAMMER ANARCHY", A POST-AGILE CONCEPT POPULARIZED BY FRED GEORGE A FEW YEARS AGO.

WITHIN 24 HOURS, I WAS TOLD BY THE CIO TO LEAVE IMMEDIATELY.



### WHY I RETURNED

THE ONLY REASON I'M BACK IS THAT THE CIO WAS PREDICTABLY BURIED BY THE MESS HE CREATED. I SEE ON LINKEDIN THAT HE'S HAD SEVERAL DIFFERENT EMPLOYERS IN THE LAST SEVERAL YEARS.

I WAS CAJOLED TO RETURN TO THE CLIENT BY THE PRESENT DEVELOPMENT LEADER/MANAGER - WE WERE FRIENDS OVER THE YEARS, AND I COMMUNICATED WITH HIM REGULARLY AFTER MY DEMISE.

ONE OF THE WAYS THE HE GOT ME TO RETURN WAS BY CONVINCING ME THAT WE WAS GOING TO MAKE THE CHANGE TO SMALLER AUTONOMOUS TEAMS THAT WERE COLOCATED.

THE IDEA THAT IT'S CHEAPER TO PAY PEOPLE A LOT LESS, DISTRUST THEM, KEEP THEM FROM AUTONOMY, MANAGE THEM CLOSELY, AND THEN WONDER WHY THEY CAN'T GET IT RIGHT IS NOT ROCKET SCIENCE. IT'S JUST COMMON SENSE.

WE'RE NOT ANYWHERE NEAR PROGRAMMER ANARCHY, AND WE'RE NOT IN DANGER OF HAVING TO DEAL WITH THAT ANYTIME SOON. BUT, UNDERSTANDING WHAT A MORE PERFECT WORLD CAN LOOK LIKE, AND MAKING CONTINUOUS IMPROVEMENTS TO HAVE THAT JOURNEY IS ALL ONE CAN RIGHTLY ASK FOR.

# DEVELOPMENT ENVIRONMENTS

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### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





#### DEVELOPMENT ENVIRONMENTS







#### DEVELOPMENT INFRASTRUCTURE





#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











### PRODUCTION INFRASTRUCTURE











### DEVELOPING A LEARNING ORGANIZATION









#### THE TALE FOR THE MISBEGOTTEN





# DEVELOPMENT INFRASTRUCTURE

#### DO YOU TREAT YOUR DEVELOPERS LIKE "KNOWLEDGE WORKERS?"



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#### "AGILE" PROCESS MANAGEMENT TOOLS



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#### "AGILE" TESTING TOOLS



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THESE ARE SO MARRY THAT ARE SWATTER BY VENDOUS STEERING THEIR "DOMPREHENSTIVE VALUTIONS" THAT MAGECALE? CAN DO EVERTRONG FOR EVERYONE.

THE MOST EGRECIOUS EXAMPLE TRAT L'VE SERVILLERATET EL SOMETHERS CALLED TESTMAGA((IM) TRAT PROBLESS TO BE AN EMITSPACES SEEL AUTOMATION PLATFORM TRAT USES ACTEFECTAL INTELLIGENCE TO BOTTWCTROWN, VECTOSTY, AND PROFORMANCE TESTING

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#### GAIN KNOWLEDGE AND TRUST YOUR TEAMS TO SOLVE PROBLEMS



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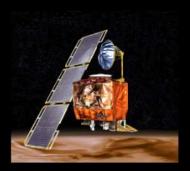
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- THE CONTROLS.

   Sett Tid a microscopic, there's recording which records the a microscopic resolution.
- But seems ray was to be tool top over also

## DO YOU TREAT YOUR DEVELOPERS LIKE "KNOWLEDGE WORKERS?"







THE REALITY IS THAT WAY TOO MANY "ENTERPRISE" DEVELOPMENT SHOPS TREAT THEIR DEVELOPERS THE SAME AS THEIR "CUSTOMER SERVICE" OR "KNOWLEDGE WORKERS".

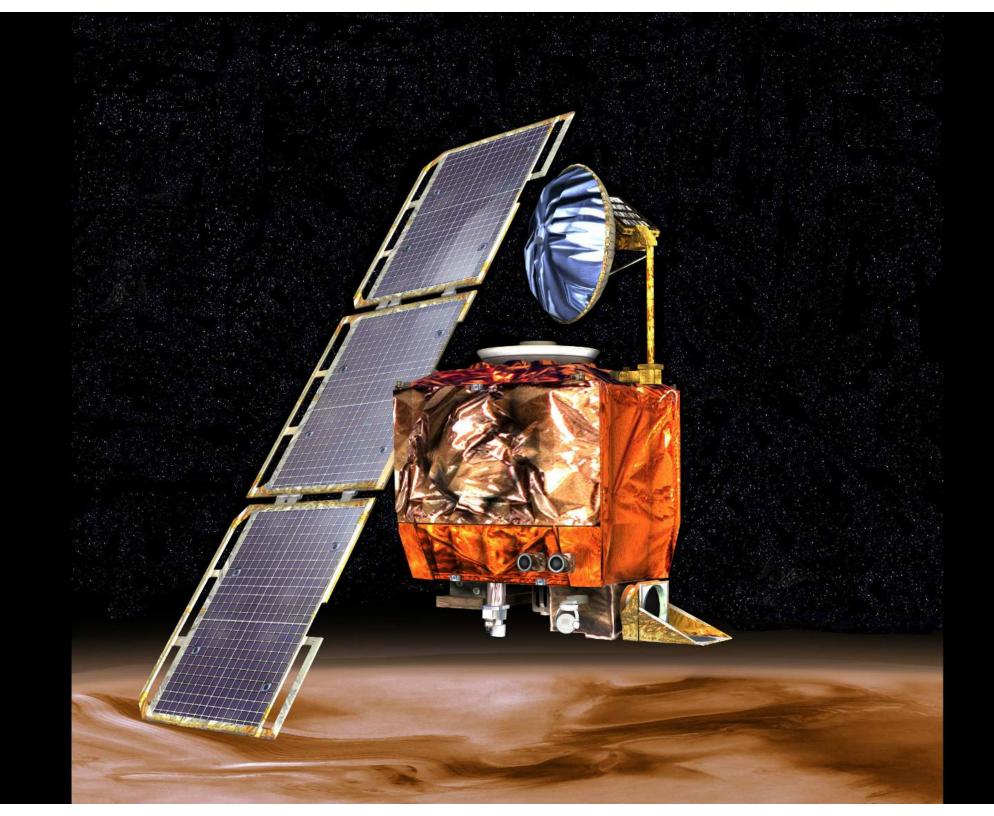
THAT IS, THEY LOCK DOWN THE ENVIRONMENTS, AND KEEP PEOPLE FROM WANDERING OUT FOR NEW TOOLS OR OTHER THINGS THEY LEARN ABOUT FROM THE INTERNET OR OTHER PLACES.

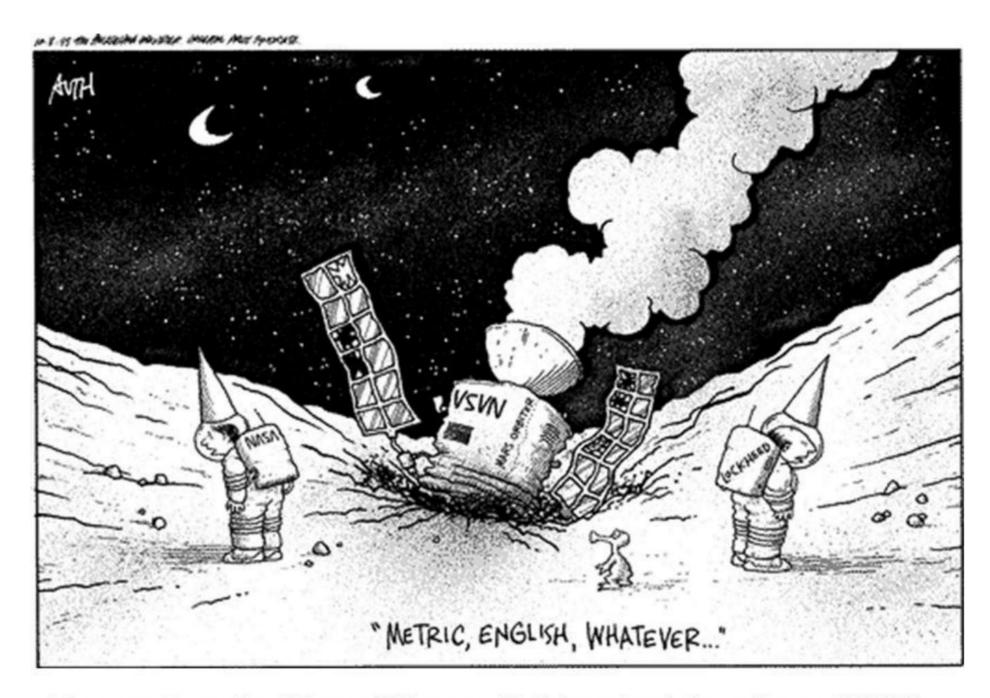
SOME OF THIS COMES FROM THE IDEA OF "ENTERPRISE ARCHITECTS", WHO GENERALLY FEEL THAT HAVING THE ORGANIZATION SUPPORT MANY DIFFERENT TOOLS WILL LEAD TO CONFUSION AND WASTE BY TRYING TO ACCOMMODATE TOO MANY DIFFERENT STANDARDS.

THEY ARE WORRIED ABOUT SCENARIOS LIKE THE LOSS OF THE MARS CLIMATE ORBITER IN 1999.

- ON SEPTEMBER 23, 1999, COMMUNICATION WITH THE SPACECRAFT WAS LOST AS THE SPACECRAFT WENT INTO ORBITAL INSERTION, DUE TO GROUND-BASED COMPUTER SOFTWARE WHICH PRODUCED OUTPUT IN UNITS OF POUND-FORCE SECONDS BY THE GOOD FOLKS AT LOCKEED IN DENVER CO, INSTEAD OF THE STANDARD NEWTON-SECONDS THAT THE PEOPLE AT THE JET PROPULSION LABORATORY IN PASADENA CA WERE EXPECTING.
- THE SPACECRAFT ENCOUNTERED MARS ON A TRAJECTORY THAT BROUGHT IT TOO CLOSE TO THE PLANET, AND IT WAS EITHER
  DESTROYED IN THE ATMOSPHERE OR VEERED BACK OFF INTO SPACE AFTER LEAVING MARS' ATMOSPHERE.
- ONE THING TO NOTE HERE IS THAT LOCKEED WAS UNDER CONTRACT WITH NASA TO PROVIDE STANDARD SI UNITS FOR THE MISSION. SO WE'RE GOING TO SUE THEM? WHAT ABOUT THE MISSED OPPORTUNITY FOR SCIENCE?
- MY POINT HERE IS THAT IF, INSTEAD OF MAKING AN OVERLY COMPLEX SYSTEM THAT REQUIRED THE INTERACTION OF TWO TEAMS, WHAT IF JUST THE ONE TEAM (THE ONE AT JPL) WERE RESPONSIBLE FOR THE ENTIRE MISSION?



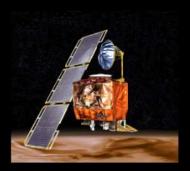




Remember the Mars Climate Orbiter incident from 1999?

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### USE WHATEVER TOOLS THE TEAM FINDS USEFUL!



TEAMS SHOULD BE FREE TO USE WHATEVER TOOLS THEY WANT TO MEET THE GOALS.

FOR EXAMPLE, IF THEY WANT A PARTICULAR IDE FOR THEIR WORK, SO LONG AS THEY CAN INTERACT WITH THINGS LIKE THE SOURCE CODE REPOSITORY CORRECTLY, WHY SHOULD A CENTRALIZED COMMITTEE THAT DOESN'T UNDERSTAND THE ISSUES FACED BY THIS TEAM'S DEVELOPMENT WORK HAVE THE POWER TO FORCE THEM TO USE ONLY CERTAIN TOOLS OR CERTAIN FRAMEWORKS TO USE?

I FEAR THAT SOME OF THIS HAS TO DO WITH ORGANIZATIONAL TRUST ISSUES.

AND WITH THE DISFUNCTION KNOWN AS HIPPO DECISION MAKING.

HIPPO STANDS FOR "HIGHEST PAID PERSON'S OPINION".

WE NEED OUR HIPPOS TO HELP ENABLE DECISION MAKING AT THE LOWEST POSSIBLE LEVEL. NOT MAKE DECISIONS FOR EVERYONE. ONE GREAT REASON IS THAT CENTRALIZED DECISION MAKING DOES NOT SCALE. THAT WILL MEAN MORE AND MORE MEETINGS AMONG THOSE WHO NEED A DECISION MADE TO BE ALLOWED TO PROCEED.

## DO YOU FORCE YOUR DEVELOPERS TO THINK LIKE HACKERS?



AN EVEN MORE DAMMING PROBLEM IS THAT OF NETWORK CONNECTIVITY. MOST "ENTERPRISE" ORGANIZATIONS UNLEASH THEIR SECURITY PERSONNEL TO LOCK DOWN THE ORGANIZATION BEHIND PROXY SERVERS AND/OR FIREWALLS THAT ARE OVERLY RESTRICTIVE AND INHIBIT ACTUAL DEVELOPMENT.

I'VE SEEN DEVELOPERS START TO THINK LIKE HACKERS JUST TO GET THERE WORK DONE! THEY END UP SETTING UP VPNS TO ALLOW MORE ACCESS TO NEEDED INTERNET RESOURCES, SUCH AS MAVEN OR DOCKER REPOSITORIES, JUST SO THEY CAN GET THE NEWEST AND BEST TOOLS AND FRAMEWORKS TO WORK FROM.

I'M NOT SUGGESTING THAT ORGANIZATIONS JUST OPEN THEIR NETWORKS WIDE OPEN AND ALLOW ANYTHING AND ANYONE FULL ACCESS TO EVERYTHING.

- SECURITY IS AN EVER INCREASING IMPORTANT CONCERN.
- BUT THE PEOPLE THAT NEED TO SOLVE IT TYPICALLY ARE THE ONES THAT UNDERSTAND THE ISSUES.
- THEY NEED EDUCATION AND SENSITIVITY TO THINGS THAT CAN GO WRONG AND HAVE TIME TO
  REMAIN VIGILANT IN THE FACE OF THE DARK SIDE TO THE INTERNET THAT ARE LOOKING TO STEAL
  AND PILFER.

### "AGILE" PROCESS MANAGEMENT TOOLS





AND, WHILE WE'RE ON THE TOPIC OF INFRASTRUCTURE, WHY IS IT THAT "ENTERPRISE ARCHITECTS" ARE ALWAYS THE ONES THAT WANT THE HEAVYWEIGHT AND EXPENSIVE SOLUTIONS TO PROBLEMS THAT CAN BE EASILY SOLVED WITH INEXPENSIVE, IF NOT SO PRETTY TOOLS?

AS A TRIVIAL EXAMPLE, THINK OF YOUR "AGILE PROCESS MANAGEMENT" TOOLS. WHICH, TO ME AT LEAST, SEEM A LOT LIKE "AGILE PROJECT MANAGEMENT" TOOLS.

FOR A HIGH PERFORMANCE COLOCATED TEAM, IS THERE EVER A REASON FOR TOOLS LIKE RALLY (I MEAN CA AGILE CENTRAL) OR ATLASSIAN'S JIRA?

THESE TOOLS REINFORCE THE WRONG THINGS, LIKE EXTENSIVE REQUIREMENTS MANAGEMENT, AMBITIOUS REPORTING (WITH TIMEKEEPING!), REQUIREMENTS TRACEABILITY, OVER BROAD PLANNING CYCLES, AND SO ON.

I LIKE TO USE THE SIMPLEST THING THAT CAN POSSIBLY WORK.

IF YOU'RE FORCED TO USE THINGS LIKE RALLY OR JIRA, KEEP THE STORY AS LINK TO THE EXECUTABLE REQUIREMENT, CREATED IN GHERKIN AND PRODUCED BY THE THREE AMIGOS.

### OBSERVER EFFECT - AGILE







BY AXOSOFT.COM

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### "AGILE" PROCESS MANAGEMENT TOOLS





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### "AGILE" TESTING TOOLS



Snake oil is wonderful stuff!

"Just try is uson, door friends, put try it men and you'll urve be uithout it. For myrocases, for sport storouth, for all types of ashes and alls, for huilding the blood! It's good, my friends. It's just neutrally the loca!"

There's a peculiar bound of 'unabe call' being probled in America body. It's the 'unreal' warty whose sponses talk like this 'like the federal government other are problems for running things. Let it take over the discusse. The reliberal the electric light and power runguades ., and other materials.

other industries and acroices."

Most of them people would say they're against secialism. They just think ensired of this luminus or that multi-ry m service by the government would be much the superior than the community of the superior of the community.

What they don't craline is: when any powerness takes over comple things, socialism comes automatically.

Every line you led government side another souther, you how another freedom. And every hot freedom moves on those to a socialistic U. S. A. Socialism's promises neglect sound southing and arcting. But we do the promises of the manualling make oil. Neither cares are time. Buth are dangerous when people fall for them.

an isomorphic property and property and property and Power Composites, which guidded this advertisement are flighting crouping socialism whereaves on find it. We believe of ty-may built, now, Why not talk it over this work with five of your friends and neighbors? The threat of American socialism is everyome, penhirm because it's everyome's manner,

Affects on beauty from the original

THIS BECOMES MUCH WORSE WITH TESTING TOOLS.

THERE ARE SO MANY THAT ARE SWAYED BY VENDORS SELLING THEIR "COMPREHENSIVE SOLUTIONS" THAT MAGICALLY CAN DO EVERYTHING FOR EVERYONE.

THE MOST EGREGIOUS EXAMPLE THAT I'VE SEEN RECENTLY IS SOMETHING CALLED TESTMAGIC(TM) THAT PROMISES TO BE AN ENTERPRISE TEST AUTOMATION PLATFORM THAT USES ARTIFICIAL INTELLIGENCE TO DO FUNCTIONAL, SECURITY, AND PERFORMANCE TESTING WITHOUT WRITING ANY CODE!

WHEN I WAS FORCED TO SPEND TIME TO LOOK AT THIS, I WAS HUMORED TO SEE THAT IT WAS JUST A FANCY WAY FOR PEOPLE TO CAPTURE SCREEN INPUTS AND THEN USE THEM IN CODE THAT YOU THEN WROTE TO TEST THE USER INTERFACE FOR AN APPLICATION.

IN OTHER WORDS, THE EASY STUFF WAS MADE EASY AND NO HELP AT ALL FOR THE HARD BITS.

### GAIN KNOWLEDGE AND TRUST YOUR TEAMS TO SOLVE PROBLEMS



IT SADDENS ME WHEN PEOPLE ARE SO DESPERATE TO GET THINGS DONE AND HAVE SO LITTLE ABILITY TO ACTUALLY ACT ON THOSE NEEDS THAT THEY FALL PREY TO LOOKING AT GLOSSY BROCHURES AND ASKING IF OTHER COMPANIES THAT THEY'VE HEARD OF USE THE SOFTWARE.

THAT'S NO WAY TO DEVELOP SOFTWARE.

IT'S NOT EVEN A GOOD WAY TO RUN AN IT SHOP!

BUY SOFTWARE WHEN YOU UNDERSTAND THE PROBLEM AND FIND THAT THE PURCHASE SAVES YOU TIME, AND THEREFORE MONEY.

BUT DEPENDING ON OTHERS TO SOLVE YOUR PROBLEMS MAGICALLY FOR YOU IS SIMPLY AN EXERCISE IN SELF-DECEPTION.

#### THINK OF IT THIS WAY:

- YOU CAN LEARN TO COOK AND PREPARE DELICIOUS AND NUTRIOUS MEALS AT HOME, OR YOU CAN BUY FROZEN MEALS FOR EVERYTHING.
- SURE. ON A BUSY NIGHT, THERE'S NOTHING WRONG WITH HEATING UP A FROZEN ENTREE.
- BUT WOULD YOU WANT TO DO THAT FOR EVERY MEAL?

# DEVELOPMENT INFRASTRUCTURE

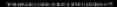
#### DO YOU TREAT YOUR DEVELOPERS LIKE "KNOWLEDGE WORKERS?"



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#### "AGILE" PROCESS MANAGEMENT TOOLS



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#### USE WHATEVER TOOLS THE TEAM FINDS USEFUL!



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THAT THAT TOWN OF THEIR BALL I'VE ON WITH BUCKERS FOR THAT I SHOT

AND WITH THE REST BOTTOM EXERGING SCRIPTS AND EXECUTION SERVICE.

BOTHE STANGE FOR "HEARIST PAID PRODUCES OF MICH."

NI NITH CONTENTS TO THE SAME BUILDING MACHINE AT THE CONSTRUCTION LEVEL. NO FAMILY ACCORDING TO CIVILETAL TWO SHIPS THE CONTROL OF THE CONTROL TO SHIPS THE SHI

#### DO YOU FORCE YOUR DEVELOPERS TO THINK LIKE HACKERS?



AN EVEN MODE BUNDALING PROBLEM IS TIME OF METWOOD COMMISSIONEY. MIDST "ENTERFACE" ORAMITATION) DREATH THE RESIDENT PRESIDENCE THE LOCK DOMESTIFF OR AMELIATION REFINE PROFE DEVENT AND ASSESSMENT THAT AND DETERM RECOGNITION AND THRIBE TO THE DESTROYMENT

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- . But had more than also do yours or hard our set be over much beare. Case he inven-
- THEY HELD EXPORTINGS AND SERVICIALISTS OF THIRD CAR AND RESIDE AND HAVE THAT IN REPARTMENT AND THE FACT OF THE DARK COLD TO THE INSTRUCT TRANSPORT OF FREE TO SEE

#### "AGILE" TESTING TOOLS



THIS BETOMES MICH MODE WITH SESTING TORNS

THESE ARE SO MARRY THAT ARE SWATTER BY VENDOUS STEERING THEIR "DOMPREHENSTIVE VALUTIONS" THAT MAGECALE? CAN DO EVERTRONG FOR EVERYONE.

THE MOST EGRECIOUS EXAMPLE TRAT L'VE SERVILLERATET EL SOMETHERS CALLED TESTMAGA((IM) TRAT PROBLESS TO BE AN EMITSPACES SEEL AUTOMATION PLATFORM TRAT USES ACTEFECTAL INTELLIGENCE TO BOTTWCTROWN, VECTOSTY, AND PROFORMANCE TESTING

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#### GAIN KNOWLEDGE AND TRUST YOUR TEAMS TO SOLVE PROBLEMS



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- But seems ray was to be tool top over also





#### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





#### DEVELOPMENT ENVIRONMENTS







#### DEVELOPMENT INFRASTRUCTURE





#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











### PRODUCTION INFRASTRUCTURE











### DEVELOPING A LEARNING ORGANIZATION









#### THE TALE FOR THE MISBEGOTTEN





# ON CODING PRACTICES

### TRUE TECHNICAL COACHING MATTERS



ALMOST 40 YEARS AND, THE LIDHINARY COMPUTER SCIENTIST C.A. TORAGE (THE GIVENNO INVENTION QUECKSONT) STATUS. "THEEL MEETING WAS SO CONSTRUCTION A NOTIONAL CONSIDERATION OF THE STATE AND ADMITT THAT HERE AND DOSTROOPEY AND OFFICIENCIES. THE CONSIDERANCE AND ADMITT ADMITT ADMITTS AND ADMITT ADMITTS AND ADMITT ADMITTS. AND ADMITTS AND ADMITTS AND ADMITTS AND ADMITTS. AND ADMITTS ADMITTS AND ADMITTS ADMITTS AND ADMITTS AND ADMITTS ADMITTS ADMITTS AND ADMITTS ADMITTS AND ADMITTS AND ADMITTS ADMITTS AND ADMITTS ADMITTS ADMI

WITHOUT A DOUBT, THE RANDEST HIGHE TRANS FIND LACKING ON "AGILE TRANSFORMATIONS" FOR MORE THAN 10 YEARS IS THAT WE HAVE SO MAND "AGILE COUCHS" THAT RON'T KNOW HIGH TO PROGRAM IN THE MIDDRIN SETTINGS.



THER REPORTE FOR MERIPYONS RECOVERAGE OF THE TWO CORDING PRACTICES ARE TRANSPORTED "MAKE SURE THAT YOU UNIT TEST EVERYTHING." "CLES YOUR TEST COVERAGE OF TO 100% AND EVERYTHING WITH AT RETURN."

SABLY, THEY DON'T UNDERSTAND THAT TEST COVERAGE, WHILE DESTRABLE, IS NOT THE SAME AS CRATSMANISHEY IN CORE, MRK IS IT INDICATIVE OF MINISTER

AND MEAT THEY REALLY DON'T GET IS TRAT AND ING UNIT TESTING TO MANY LIGARY SYSTEMS, ONES TRAT WERRY'T MILL DESIGNED TO REGEN METH, LAM BE EXAMENT METH PERTIL, EXTREMELY COSTLY TO THE TOGETHER, AND PERTAPS NOT XIXTHE THE COST.

BUT SINCE THESE ARE AGLEC COMPRES SATING THE WOLLD OF "MORE UNIT TESTS", "HIGHER TEST COVERAGE", THE OFGANIZATIONS DIRAL EMPLOY THEM TAKE IT AS IT THE WORDS ARE DIVINE

#### THE BASICS OF WHAT TO LOOK FOR IN ALL CODE



I'M VERY PRAGMATIC IN NOW I COACH FOR CODENG.

WHEN IT COMES TO ALL CODE, OLD AND NEW, 5 WANT TO SEE SOME PRETTY BASIC STILLE

- Egget that is strictly version contributed in a repusitiony. No exceptions. And, 85W, scripts are code
  as well
- Come I Cannerad. Indepartation, maning, etc. I'd love to put lengthings, but three is so much code that is see in production with clients that won't allow this due to some point besidn becisions (allocitecture) allocat made.
- AND, 6TW, COMMENTS SHOULD BE USED ONLY SPACINGLY, WITH MOST OF SHE HEAVY LIFTING OF BOA THE CODE WORKS LONG BY GOOD MARKING AND STATEMENT PREASURED.
- . CODE WETH ENAMPLES OF HOW ET'S USED. HOPEFULLY, THESE ARE ANTOMATED UNET TESTS, BUT WE CAN MIGOTICATE.
- . BUILD SCRIPTS THAT TAKE ENTO ACCOUNT DEPENDENCY MANAGEMENT, SO I CAN BUILD AND USE THE CODE.

### Clean Code

#### THE BASICS OF WHAT TO LOOK FOR IN NEW CODE



I DELEVE THAT WE MAY MANDATE A NUMBER OF THINGS IN OUR DEFINITIONS OF DEVELOPMENT COMPLETE FOR NEW CODE. SHEE AS:

- Elegance: Take a look at Volumes 1 and 2 of Yesor Bugayenko's Elegant Objects for the delates
- ONE REASON TRAT I LOVE YEGOR'S APPROACH SO MUCH IS TRAT IT HOWS BOLES INTO THE PRECONCEIVED NOTIONS THAT EVERY DESIGN PATTERN AS A FORM OF BEAUTY AND WONDER.
- Some themes that propre thems are sacrosance (such as stongletons) are actually a
  retreat ento truncing about how sometring is accomplished (but to the status
  envolved), ather tran committees the on what and why we do code sometring the wat
  that are do
- BACK TO READABLELTY, I WOW WOULD AND TRAT CODE LENGTH IS LINFORTANT. THIS WILL START TO KLALLY FORCE STRONG CONISCON, AND BOREFULLY LOOSE COUPLING.

THE MORE A TEAM HAY AN APCRITECTURE THAT IS "6000", THE CLOSER THAT IT RECOMES POSSIBLE TO USE TRUE TOD. AND THAT'S A 6000 MAY TO ITERATIVELY ENHANCE DESIGN.

#### THE ROLE OF THE HUMAN MIND



NOTICE 1841 MOST OF 186 THEMS SHALL EDOK FOR IN GOOD CODING PRACTICES NEED A BUMAN TO EXHICITE

A ROSS OF MINE FROM LONG AGO ONCE SATO, "MATERICIAL INFELLIGENCE IS NEVER TRAIN NO INTELLIGENCE AT ALL." NELL, TO NY KRANNEDGE, NE DON'T YET HAVE ANY AL BASED STATIC ANALYSIS TOOLS.

WE DO RAVE STATIC ANALYSES TORES, AND THREE'S NOTHING WOONG WITH CODKING AT WHAT THE TORE VIGGESTS.
WE NEED TO AREDE BY TROSE RURES AND RECOMMENDATIONS, AS WILL.

BUT MODILING WILL RELIACE THE HUMAN ADING WHER IS COMES TO WORKING WITH CODE. IT TAKES A KUMAN TO Make Good Code, and he should use another human to lock at It as well. So, without a doubt, code enviews analyse zery Programming should be part of our Croing Familiers.

I SAY ANDRON FREE PROGRAMMENS BECAUSE IT'S STELL VERY RAND FOR INC TO CONVENICE MY CLIENTS THAT FALLENG Bords and says shores. "Side 1904" as a Plyaste Floot, the Bas will along a single floot to by planes sido ben will registe to book to mode floots to eth commercialts. It's a manter of eight. And that he bas siess concerned it wor killy outself, decause too unrestando the eight, than a passenger who may not unrestando he lasses.]

### TRUE TECHNICAL COACHING MATTERS



ALMOST 40 YEARS AGO, THE LUMINARY COMPUTER SCIENTIST C.A. HOARE (THE GUY WHO INVENTED QUICKSORT) STATED: "THERE ARE TWO WAYS OF CONSTRUCTING A SOFTWARE DESIGN: ONE WAY IS TO MAKE IT SO SIMPLE THAT THERE ARE OBVIOUSLY NO DEFICIENCIES; THE OTHER WAY IS TO MAKE IT SO COMPLICATED THAT THERE ARE NO OBVIOUS DEFICIENCIES. THE FIRST METHOD IS FAR MORE DIFFICULT."

WITHOUT A DOUBT, THE HARDEST THING THAT I FIND LACKING IN "AGILE TRANSFORMATIONS" FOR MORE THAN 10 YEARS IS THAT WE HAVE SO MANY "AGILE COACHES" THAT DON'T KNOW HOW TO PROGRAM IN THE MODERN SETTINGS.



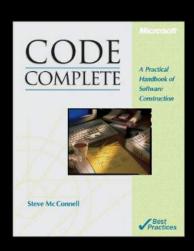
THEIR RESPONSE FOR ACHIEVING TECHNICAL EXCELLENCE IN CODING PRACTICES ARE THINGS LIKE "MAKE SURE THAT YOU UNIT TEST EVERYTHING". "GET YOUR TEST COVERAGE UP TO 100% AND EVERYTHING WILL BE BETTER!"

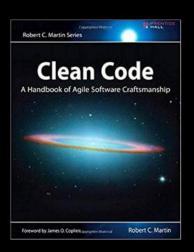
SADLY, THEY DON'T UNDERSTAND THAT TEST COVERAGE, WHILE DESIRABLE, IS NOT THE SAME AS CRAFTSMANSHIP IN CODE, NOR IS IT INDICATIVE OF QUALITY.

AND WHAT THEY REALLY DON'T GET IS THAT ADDING UNIT TESTING TO MANY LEGACY SYSTEMS, ONES THAT WEREN'T WELL DESIGNED TO BEGIN WITH, CAN BE FRAUGHT WITH PERIL, EXTREMELY COSTLY TO PUT TOGETHER, AND PERHAPS NOT WORTH THE COST.

BUT SINCE THESE ARE AGILE COACHES SAYING THE WORDS OF "MORE UNIT TESTS", "HIGHER TEST COVERAGE", THE ORGANIZATIONS THAT EMPLOY THEM TAKE IT AS IF THE WORDS ARE DIVINE.

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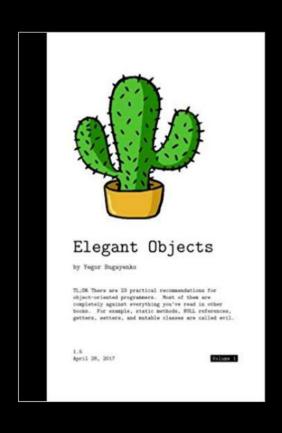


I'M VERY PRAGMATIC IN HOW I COACH FOR CODING.

WHEN IT COMES TO ALL CODE, OLD AND NEW, I WANT TO SEE SOME PRETTY BASIC STUFF:

- CODE THAT IS STRICTLY VERSION CONTROLLED IN A REPOSITORY. NO EXCEPTIONS. AND, BTW, SCRIPTS ARE CODE
  AS WELL.
- CODE I CAN READ. INDENTATION, NAMING, ETC. I'D LOVE TO PUT LENGTH HERE, BUT THERE IS SO MUCH CODE THAT I SEE IN PRODUCTION WITH CLIENTS THAT WON'T ALLOW THIS DUE TO SOME POOR DESIGN DECISIONS (ARCHITECTURE) ALREADY MADE.
- AND, BTW, COMMENTS SHOULD BE USED ONLY SPARINGLY, WITH MOST OF THE HEAVY LIFTING OF HOW THE CODE
  WORKS DONE BY GOOD NAMING AND STATEMENT PHRASEOLOGY.
- CODE WITH EXAMPLES OF HOW IT'S USED. HOPEFULLY, THESE ARE AUTOMATED UNIT TESTS, BUT WE CAN NEGOTIATE.
- BUILD SCRIPTS THAT TAKE INTO ACCOUNT DEPENDENCY MANAGEMENT, SO I CAN BUILD AND USE THE CODE.

### THE BASICS OF WHAT TO LOOK FOR IN NEW CODE

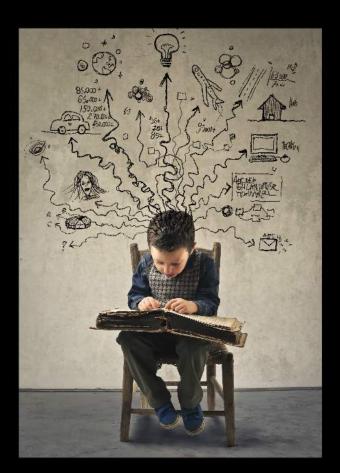


I BELIEVE THAT WE MAY MANDATE A NUMBER OF THINGS IN OUR DEFINITIONS OF DEVELOPMENT COMPLETE FOR NEW CODE, SUCH AS:

- ELEGANCE. TAKE A LOOK AT VOLUMES 1 AND 2 OF YEGOR BUGAYENKO'S ELEGANT OBJECTS FOR THE DETAILS.
- ONE REASON THAT I LOVE YEGOR'S APPROACH SO MUCH IS THAT IT BLOWS HOLES INTO THE PRECONCEIVED NOTIONS THAT EVERY DESIGN PATTERN IS A FORM OF BEAUTY AND WONDER.
- SOME THINGS THAT PEOPLE THINK ARE SACROSANCT (SUCH AS SINGLETONS) ARE ACTUALLY A
  RETREAT INTO THINKING ABOUT HOW SOMETHING IS ACCOMPLISHED (DUE TO THE STATICS
  INVOLVED), RATHER THAN CONCENTRATING ON WHAT AND WHY WE DO CODE SOMETHING THE WAY
  THAT WE DO.
- BACK TO READABILITY, I NOW WOULD ADD THAT CODE LENGTH IS IMPORTANT. THIS WILL START TO
  REALLY FORCE STRONG COHESION, AND HOPEFULLY LOOSE COUPLING,

THE MORE A TEAM HAS AN ARCHITECTURE THAT IS "GOOD", THE CLOSER THAT IT BECOMES POSSIBLE TO USE TRUE TDD. AND THAT'S A GOOD WAY TO ITERATIVELY ENHANCE DESIGN.

### THE ROLE OF THE HUMAN MIND



NOTICE THAT MOST OF THE THINGS THAT I LOOK FOR IN GOOD CODING PRACTICES NEED A HUMAN TO EXAMINE.

A BOSS OF MINE FROM LONG AGO ONCE SAID, "ARTIFICIAL INTELLIGENCE IS BETTER THAN NO INTELLIGENCE AT ALL." WELL, TO MY KNOWLEDGE, WE DON'T YET HAVE ANY AI BASED STATIC ANALYSIS TOOLS.

WE DO HAVE STATIC ANALYSIS TOOLS, AND THERE'S NOTHING WRONG WITH LOOKING AT WHAT THE TOOL SUGGESTS.
WE NEED TO ABIDE BY THOSE RULES AND RECOMMENDATIONS, AS WELL.

BUT NOTHING WILL REPLACE THE HUMAN MIND WHEN IT COMES TO WORKING WITH CODE. IT TAKES A HUMAN TO MAKE GOOD CODE, AND WE SHOULD USE ANOTHER HUMAN TO LOOK AT IT AS WELL. SO, WITHOUT A DOUBT, CODE REVIEWS AND/OR PAIR PROGRAMMING SHOULD BE PART OF OUR CODING PRACTICES.

I SAY AND/OR PAIR PROGRAMMING BECAUSE IT'S STILL VERY HARD FOR ME TO CONVINCE MY CLIENTS THAT PAIRING WORKS AND SAVES MONEY. [SIDE STORY: AS A PRIVATE PILOT, THE FAA WILL ALLOW A SINGLE PILOT TO FLY PLANES SOLO THAT WILL REQUIRE TWO OR MORE PILOTS TO FLY COMMERCIALLY. IT'S A MATTER OF RISK. AND THAT THE FAA IS LESS CONCERNED IF YOU KILL YOURSELF, BECAUSE YOU UNDERSTAND THE RISKS, THAN A PASSENGER WHO MAY NOT UNDERSTAND THE RISKS.]

# ON CODING PRACTICES

### TRUE TECHNICAL COACHING MATTERS



ALMOST 40 YEARS AND, THE LIDHINGAY COMPUTER SCIENTIST C.A. TORAGE (THE GAY WIND INVENTED QUECKOOT) STATUS. "THEEL MEETING WAS SET CONSTRUCTION A NOTIFICATION OF STATE OF THE STATE OF THE

WITHOUT A DOUBT, THE RANDEST HIGHE TRANS FIND LACKING ON "AGILE TRANSFORMATIONS" FOR MORE THAN 10 YEARS IS THAT WE HAVE SO MAND "AGILE COUCHS" THAT RON'T KNOW HIGH TO PROGRAM IN THE MIDDRIN SETTINGS.



THER REPORTE FOR MERIPYONS RECOVERAGE OF THE TWO CORDING PRACTICES ARE TRANSPORTED "MAKE SURE THAT YOU UNIT TEST EVERYTHING." "CLES YOUR TEST COVERAGE OF TO 100% AND EVERYTHING WITH AT RETURN."

SABLY, THEY DON'T UNDERSTAND THAT TEST COVERAGE, WHILE DESTRABLE, IS NOT THE SAME AS CRATSMANISHEY IN CORE, MRK IS IT INDICATIVE OF MINISTER

AND MEAT THEY REALLY DON'T GET IS TRAT AND ING UNIT TESTING TO MANY LIGARY SYSTEMS, ONES TRAT WERRY'T MILL DESIGNED TO REGEN METH, LAM BE EXAMENT METH PERTIL, EXTREMELY COSTLY TO THE TOGETHER, AND PERTAPS NOT XIXTHE THE COST.

BUT SINCE THESE ARE AGLEC COMPRES SATING THE WOLLD OF "MORE UNIT TESTS", "HIGHER TEST COVERAGE", THE OFGANIZATIONS DIRAL EMPLOY THEM TAKE IT AS IT THE WORDS ARE DIVINE

#### THE BASICS OF WHAT TO LOOK FOR IN ALL CODE



I'M VERY PRAGMATIC IN NOW I COACH FOR CODENG.

WHEN IT COMES TO ALL CODE, OLD AND NEW, 5 WANT TO SEE SOME PRETTY BASIC STILLE

- Egget that is strictly version contributed in a repusitiony. No exceptions. And, 85W, scripts are code
  as well
- Come I Cannerad. Indepartation, maning, etc. I'd love to put lengthings, but three is so much code that is see in production with clients that won't allow this due to some point besidn becisions (allocitecture) allocat made.
- AND, 6TW, COMMENTS SHOULD BE USED ONLY SPACINGLY, WITH MOST OF SHE HEAVY LIFTING OF BOA THE CODE WORKS LONG BY GOOD MARKING AND STATEMENT PREASURED.
- . CODE WETH ENAMPLES OF HOW ET'S USED. HOPEFULLY, THESE ARE ANTOMATED UNET TESTS, BUT WE CAN MIGOTICATE.
- . BUILD SCRIPTS THAT TAKE ENTO ACCOUNT DEPENDENCY MANAGEMENT, SO I CAN BUILD AND USE THE CODE.

### Clean Code

#### THE BASICS OF WHAT TO LOOK FOR IN NEW CODE



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- Elegance: Take a look at Volumes 1 and 2 of Yesor Bugayenko's Elegant Objects for the delates
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- Some themes that propre thems are sacrosance (such as stongletons) are actually a
  retreat ento truncing about how sometring is accomplished (but to the status
  envolved), ather tran committees the on what and why we do code sometring the wat
  that are do
- BACK TO READABLELTY, I WOW WOULD AND TRAT CODE LENGTH IS LINFORTANT. THIS WILL START TO KLALLY FORCE STRONG CONISCON, AND BOREFULLY LOOSE COUPLING.

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BUT MODILING WILL RELIACE THE HUMAN ADING WHER IS COMES TO WORKING WITH CODE. IT TAKES A KUMAN TO Make Good Code, and he should use another human to lock at It as well. So, without a doubt, code enviews analyse zery Programming should be part of our Croing Familiers.

I SAY ANDRON FREE PROGRAMMENS BECAUSE IT'S STELL VERY RAND FOR INC TO CONVENICE MY CLIENTS THAT FALLENG Bords and says shores. "Side 1904" as a Plyaste Floot, the Bas will along a single floot to by planes sido ben will registe to book to mode floots to eth commercialts. It's a manter of eight. And that he bas siess concerned it wor killy outself, decause too unrestando the eight, than a passenger who may not unrestando he lasses.]





#### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





#### DEVELOPMENT ENVIRONMENTS







#### DEVELOPMENT INFRASTRUCTURE





#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











### PRODUCTION INFRASTRUCTURE











### DEVELOPING A LEARNING ORGANIZATION









#### THE TALE FOR THE MISBEGOTTEN





# LET'S TALK ABOUT TESTING

#### THE REAL CHALLENGE



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#### A TALE OF TWO HYPOTHESES



AUTOMATIC PART VESTING ENOUGH THAT WE REPORTED SHAT WE WITH CODE

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#### IT TOOK YEARS TO GET THIS FAT - A MONTH LONG DIET WON'T FIX IT



I'M CONSTANTAL EMENDING CEERNS EARS BEING AGTE; Docubing, anying a devolp out die; means ear i ne don't amantee all ree ells and any sen i re comeny follows and monaction and term propose a project follow that acceptives all of the emprovement comes on a screenie

LEIND THAT THERE IS NO HONEST WAY OF ESTIMATING THE TIME THAT AN ORGANIZATION WILL TAKE TO REACH THOSE GOALS, OTHER THAN SATING THAT EIT'S NEASURED (AT BEST) IN YEARS, NOT CONTROLS OF MINISTER.

#### MOVE TESTING ALL THE WAY TO THE LEFT!



THE NAT, WHEN I CODED FLAMS FOR THEM "DETRIVITIONS OF DOME", I HIS STITUTE They not notice of another deadly what footes management foot that valy use (ISEA, Pales, Etc.) and what foots in Foote, bit company "Their angles" From James

TRANS CARRACTOR RECORDS THE ENGLISHER REQUIREMENTS TRANS WE CONSTANTLY TEST Arabidy for roth sending trans we countered the reputriments, and that we draw's reenk anytheric along the war!

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### THE REAL CHALLENGE



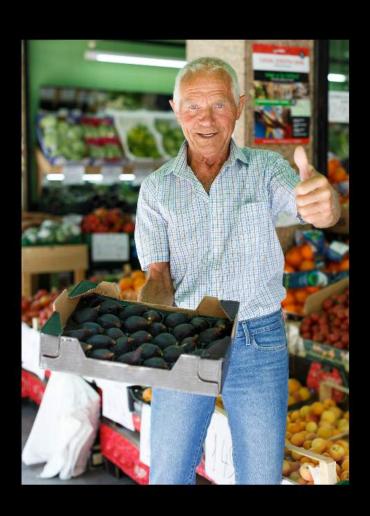
CUSTOMER EMPATHY HAS BEEN A REAL BONE OF CONTENTION FOR ME. BECAUSE I BELIEVE THAT AUTOMATED TESTING, ESPECIALLY AT THE SYSTEM INTEGRATION LEVEL, IS A VITAL AND EXTREMELY IMPORTANT PART OF THE WHOLE PROCESS.

AT ITS CORE, WE SHOULD STRIVE TO EXCITE AND DELIGHT OUR REAL CUSTOMERS, NOT SOME PROXY OR SURROGATE TO THE CUSTOMERS.

THAT MEANS EMPATHIZING DEEPLY WITH OUR CUSTOMER'S PAINS AND EXCITING AND DELIGHTING THEM WITH SOLUTIONS TO THOSE PAINS, EVEN IF THE CUSTOMER EXPRESSED NEEDS, WANTS, AND DESIRES ONLY PUT A SALVE OVER THE PAIN AND DON'T FIX THE ROOT CAUSE.

BUT THAT BECOMES A PRODUCT ISSUE, AND I DIGRESS...

### A TALE OF TWO HYPOTHESES



AUTOMATED UNIT TESTING ENSURES THAT THE HYPOTHESIS THAT WE BUILT CODE WELL CONTINUES TO BE VALID IN THE FACE OF CHANGES.

AUTOMATED INTEGRATED REGRESSION TESTING ENSURES THAT THE HYPOTHESIS THAT WE BUILT CODE THAT SATISFIES OUR REQUIREMENTS CONTINUES TO BE VALID IN THE FACE OF CHANGES.

I SAY THAT THE LATER IS MORE IMPORTANT, SINCE JOB NUMBER ONE IS EXCITING AND DELIGHTING THE CUSTOMER THAT WE EMPATHIZE WITH IN A QUEST TO FIND VALUE FOR THEM WITH OUR SOFTWARE.

THAT'S WHY I BELIEVE THAT WAY BACK IN GATHERING REQUIREMENTS, WE NEED TO EXPRESS THOSE REQUIREMENTS AS AUTOMATED DECLARATIVE BDD STATEMENTS (SO THEY CAN BE EXPRESSED IN THINGS LIKE GHERKIN AND EXECUTED IN THINGS LIKE CUCUMBER).

### MOVE TESTING ALL THE WAY TO THE LEFT!

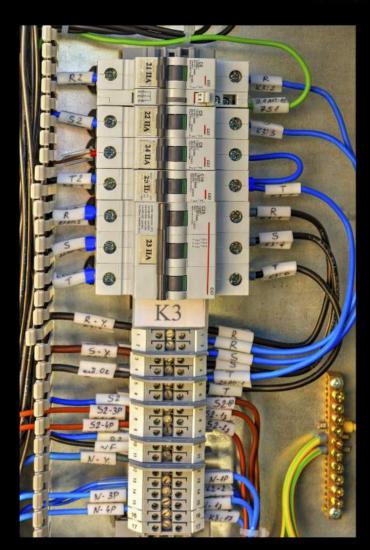


IN FACT, WHEN I COACH TEAMS FOR THEIR "DEFINITIONS OF DONE", I INSIST THAT THEY NOT WORRY SO MUCH ABOUT WHAT PROCESS MANAGEMENT TOOL THAT THEY USE (JIRA, RALLY, ETC) AND WHAT GOES IN THERE, BUT CONVENE "THREE AMIGOS" SESSIONS, AND CREATE THE GHERKIN DIRECTLY IN THE SOURCE CONTROL REPOSITORY RIGHT AWAY.

THAT GHERKIN BECOMES THE EXECUTABLE REQUIREMENTS THAT WE CONSTANTLY TEST AGAINST FOR BOTH SHOWING THAT WE COMPLETED THE REQUIREMENTS, AND THAT WE DIDN'T BREAK ANYTHING ALONG THE WAY!

SINCE MUCH OF THAT SORT OF TESTING BECOMES DRIVEN BY UI TESTING, IT CAN GET VERY DIFFICULT, ESPECIALLY WITH ORGANIZATIONS THAT ARE NEW TO THIS SORT OF TESTING.

### THE DEVOPS CONNECTION



IT BECOMES DOUBLY HARD, SINCE MANY OF THESE SYSTEMS THAT WE TEST ARE COMPOSED OF VARIOUS COMPONENT INSTANCES, AND THESE ARE THE VERY ORGANIZATIONS THAT STRUGGLE WITH PLANNING INFRASTRUCTURE, AND ARE USED TO DEPLOYING TO THINGS TO MANAGED QA SYSTEMS, RATHER THAN BUILDING QA SYSTEMS, FROM SCRATCH, FOR DOING THE TESTING.

MORE ON THIS IN A SECOND.

IN ANY CASE, I ALWAYS FEEL THAT IT'S IMPORTANT TO LAY OUT WHAT THE VISION OF WHERE THE PROMISED LAND LAYS, WHY WE WANT TO REACH THAT PLACE, AND WHAT THE BENEFITS ARE, EVEN IF I HAVE TO COMPROMISE ON MANY OF THOSE GOALS FOR QUITE A WHILE A WHILE.

THIS IS IN LINE WITH THE CONTINUOUS IMPROVEMENT THEME THAT ORGANIZATIONS IN MY COACHING SPACE NEED HELP WITH.

### IT TOOK YEARS TO GET THIS FAT - A MONTH LONG DIET WON'T FIX IT



I'M CONSTANTLY REMINDING CLIENTS THAT BEING AGILE, INCLUDING HAVING A DEVOPS CULTURE, MEANS THAT WE DON'T ANALYZE ALL THE ILLS AND GAPS IN THE CURRENT PROCESS AND WORKFLOW AND THEN PROPOSE A PROJECT PLAN THAT ACHIEVES ALL OF THE IMPROVEMENT GOALS ON A SCHEDULE.

I FIND THAT THERE IS NO HONEST WAY OF ESTIMATING THE TIME THAT AN ORGANIZATION WILL TAKE TO REACH THOSE GOALS, OTHER THAN SAYING THAT IT'S MEASURED (AT BEST) IN YEARS, NOT QUARTERS OR MONTHS.

# LET'S TALK ABOUT TESTING

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#### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





#### DEVELOPMENT ENVIRONMENTS







#### DEVELOPMENT INFRASTRUCTURE





#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











### PRODUCTION INFRASTRUCTURE











### DEVELOPING A LEARNING ORGANIZATION









#### THE TALE FOR THE MISBEGOTTEN





# PRODUCTION INFRASTRUCTURE

#### WHERE THE ACTION IS NOW



THE SET METHINGTO THE "RESET OF THE HEALT" WHEN ET COMES TO WHAT I DO DAY TO BUSY RECORDED.

LUS MOSS RECORDS FOR "DEVOES FRANCIAL" PROMODERACIONES WAR ARE RECORDS

BUT MOST MANUFA MANAGED ING. BECAUSE THEY MANGED RETRORCES FOR SHAREST THEY READ THOM "DEVICES" (COMPANDES AND TOOL SHAMONS, MAD PROMOTE THE SUITE THAT SHAPLY ARROWS A FEW (NOTICE TO A CONTRACT TO A CONTRACT OF A STATE OF A STATE OF A STATE OF A CONTRACT AND A STATE OF A PROBABLY TAGETBEE AND PARAMETERS. THEY SYNCERLY DON'T WANT TO HEAR TEXT THE PURSUAWENTAR

TADA SANI PROBADI ANI GUNER PRANDESSA NI THE "ALCOF" PRADOS MALANDACIONIS SANI PRANDITI "INTERPORT SCALED ACADE" AT THEIR SPECIALTY, MAND WITH SOME SHALL CHARGES ON PROCESS, compacts messes as at a visus time (appropriate histories bases) from four 1901

#### BUT HERE'S THE RUB



THE CLEENTS I'M FAMILLIAN WEST LEVE IN FRANC FRANCE AUDIT. FEAR OF HACKEIN.

AND LACK OF TRUST

THE SPECK CASE OF THIS THAT THEY ME THAT CHEY MASE "THE BEST AND RESCAUNT IN

THEY MAY BASE A FEW PROPER THAT THEY THIST. PSPECIALLY FOR PRODUCTION. FACING CRANGES, BUT FOR THE MOST PART, THEY ARE SO AFRAID OF THE RISKS THAT ARE OUT TREES THAT THEY RECOME KISK MOVERSE ON EVERYTHING.

#### DO WE DEVELOP OR COWER IN FEAR?



COMPLY LETTING PERMISSION FOR STANS TO DESCRIPT ON BY A DRAW TERM.

THE YORK HAZON, MANY OF MY CLINK'S THEIR SHEET CESTS OFFIS SHEET LINE GODES CHROCKATON MORGES TEST THE MARK SURTON FOR SPRINGS RIPS, FOR EXAMES

- THEY LOCK DOWN DESKTORS: HOS ALL BRILDING DOCUMENTED HES ACCESS NO ROOMS TO ALL ON THEM TO BEVERAP IS PAST MY COMPATAINISIQUE
- But lock down intensit weeks beading sends proof service and vide scort finances. - THIS CAN LEAD TO SEVELOPERS WHO BUSY BETTER LIBER AT ROME, WITH DOOR OPEN METAVORES
- THAN IN THE OFFICE. - THIS CAN LEAD TO BENTLORERS WHO RESONT TO USENIG THE SERVERS AND TRANSFAMENT MIDNES
- THIS MAKES THE DEVELOPES LOOK AND ACT LIKE HACKERS TO LICENSTY, WHICH PIRTHER
- DARRIANS THE PROBLEMS

#### DO YOU MANAGE OR DEVELOP?



FROM WHAT S'YE ERMELENCED, THE HOURS ALTTERENCE! SEE NETWEEN DED STYLE SILIBED AND PENALTIC ORGANIZATIONS AND TROST THAT PHARME PEPARS COLUMN IS WRETHER THE

PANNAGED SERVICES MEANS (10 ME):

- Text us your registeriems, walt a wille, and we'll get back to you with a
- SLAS, SERVICE PORTALS, MODIFICATION AND ESCALATION PROCESSIVES, EUC, ETC.

THIS IS THE ANTHESIS OF DEVOES, MHETRER THEY MARKES CLOUD BRIED SERVICES ON NOT. RECAUSE OF ALL THE LEAV WASTES SHAT COME OF EMAILTIMS, DIFFECTS, BATCHDOLD IMVENTIONS, EVER-PROCESSING, EVER-PRODUCTION, MOTHER WASTE, AND SOON?

#### WHAT WE NEED IS ON-DEMAND INFRASTRUCTURE AS CODE WITH A TOUCH OF GITOPS

- INTERTROME TO BEFORE BELLAND EVERY (NOTE AS WITH TREMETERS).
- INTERDICES STARE IN DETERMINISMENT FOR MAIL SOUTH THE HOME PROMETON ASSOCIATED FRANK I WE PRODUCTIONS TWO DATES INC.
- THE ADDICADAGES ACTIVITIES CONVERGENCE WITH RECOVER PARAMETERS, SACE ALL HOW HARM MORE HAVE AND OF A LILISTER, WHERE THE ENGROUNCE GO TOO, ESC.
- WIREN ON B LOW PRICE ENVIRONMENT, AS TON EXAMPLE AN ORGANIZATION PRINCETONION ENVIR A DEPRINS EXERTIF, DISTRING OF DEVELOPING CONSCITUTE DANGED THAT WILL ARREST MODERCHAIN, THE COURT A RIAL BOOKET, AND THE RESIDENCE WARRION MARTET THE BOOKET TO "CONTRACTOR: REPROSEDED" RESPUE: The short in Committee of Employment and Address and Novel Street and Respublic and the second THEIR DESIGNATION WAS CHARGED BY WHE CHARGED IN THE COUNTY CHARGE STREET A DAMAGNET OF THE CHARGE STREET.
- THE "INTERATIONS REPROBLEDE" PRIME REVIEW THE PROPOSED (BANGE, MEDIT AND COMPLETE), AND COMMET THE CHANGE, RESPECTIVE TWA CHANGE IS
- At the consumptions of the Charlest and Lord and Lord and Lord and All and the Charlest and Ch THE WASTE WATER TIME, SO THAT CAMBLES MIND BY DEVELOPING CAMBRAY ARMS ADMITTED THE PRIMARTION.

#### SIDE BENEFIT: AUDIT IS FIXED

- ONE STON REMETIL FROM THIS IS ONE THE AUDIT CONCERN. ON THE TIS, WE HAVE A DAM CALLED SAMBANES- (DILLY THAT WAS ENSIRD AND IN 2002 TO RESPOND TO THE SCANDALS FROM BRION, WOLLDEDAY, GLOBAL EDUSTINA, TYDO, AND ALTHROUGH ANDERSEM.
- One section of that law it section 40s, which decrees the steps that a company must convey with to enable addibitity
- MOST COMPANIES REPROTRED TO THAT SECTION AT DIRECTION EXTENSIVE STANDARDING PROCESSES, REQUIREMS A TION OF SERVICES, AND SO ON. REACHNS SOME OF THE BETTMEN PROCEDURE FROM COMPANSES THAT I "YE WORKER WITH MADE WE NOTH FRANCES AS WELL AS GROUGE (SIDE STORY OF EVENEST ESD).
- . THE RELIGIOUS THAT WHEN AUTOITS OCCURRED, THEY WHE SHIT WITH THE SAME SOUTH FRANTIAN THAN THAT HOW YOU AND A THAT HOW IS AN ADDRESS. WITH ESHIRIT WHEN HELEASING CODE (HEMBROW THEY AGREET THAT RELEARS OF PROCESSTION WHE THE MODRAL AND DESIRED CENTER OF DEVELOPMENT)
- ADDITIONS NAVIE SYSTEMAN AND IT WHAT CHANGES OCCURRED WHEN, WHO ADDIRECTED IT, WHAT CONTROLS WERE INVENTED. FIRE
- THE MOMENTS OF USING A PROPER CO. APPROXISE IS TRAILINE CONDICIONS WITH THE DIGITY BROADS AND MIGHT OF CONTROL THAT FORM THE STANDARD OPERATION, PROCESSIONS FOR SHELF COMPANIES AND REPLACE SHEW NOTH TIDGS TO ARD THE MINISTERS CAT WANTEYER EMPARABETHIN THEY MEED FROM THE LOSS AND REPOST DUCKS OF THE TORKS JUST TO EMPLOYER THE CO MILLIONS
- Pay assets with a fine and court of incident sectors recovered that are decaying many fastants being and one was their OF THE UNIT YORK I SEMENTIFF TWO MOVEMENT THE ORGANITY STORY FROM THE CORP. MAD STREAMING 1979 THE THE CONTRACT

### WHERE THE ACTION IS NOW



THIS IS VERY MUCH THE "BELLY OF THE BEAST" WHEN IT COMES TO WHAT I DO DAY TO DAY RECENTLY.

I GET MORE REQUESTS FOR "DEVOPS COACHING" FROM ORGANIZATIONS THAN ANY OTHER REQUEST.

BUT MOST WANT A MAGICIAN, BECAUSE THEY MAKE THEIR DECISIONS ON WHAT THEY READ FROM "DEVOPS" COMPANIES AND TOOL VENDORS, WHO PROMOTE THE MYTH THAT SIMPLY BUYING A FEW (EXPENSIVE) TOOLS AND IMPLEMENTING THEM WILL MAKE THEM "AGILE" AND "DEVOPS" COMPLAINT. PROBABLY TOGETHER AND PAINLESSLY. THEY TYPICALLY DON'T WANT TO HEAR THAT THE FUNDAMENTAL CHANGES ARE CULTURAL AND FEEL DIFFERENT THAN WHAT THEY DO NOW.

THESE SAME CLIENTS ARE SIMPLY ENAMORED BY THE "AGILE" PROCESS ORGANIZATIONS THAT PROMOTE "ENTERPRISE SCALED AGILE" AS THEIR SPECIALTY, DONE WITH SOME SMALL CHANGES IN PROCESS, WORDS, CEREMONIES, AND CERTIFICATIONS. THE COMPETITION BETWEEN THESE SCALED AGILE COMPANIES REMINDS ME OF A SCENE FROM CASABLANCA (HUMPHREY BOGART, PETER LORRE, 1942)



### WHERE THE ACTION IS NOW



THIS IS VERY MUCH THE "BELLY OF THE BEAST" WHEN IT COMES TO WHAT I DO DAY TO DAY RECENTLY.

I GET MORE REQUESTS FOR "DEVOPS COACHING" FROM ORGANIZATIONS THAN ANY OTHER REQUEST.

BUT MOST WANT A MAGICIAN, BECAUSE THEY MAKE THEIR DECISIONS ON WHAT THEY READ FROM "DEVOPS" COMPANIES AND TOOL VENDORS, WHO PROMOTE THE MYTH THAT SIMPLY BUYING A FEW (EXPENSIVE) TOOLS AND IMPLEMENTING THEM WILL MAKE THEM "AGILE" AND "DEVOPS" COMPLAINT. PROBABLY TOGETHER AND PAINLESSLY. THEY TYPICALLY DON'T WANT TO HEAR THAT THE FUNDAMENTAL CHANGES ARE CULTURAL AND FEEL DIFFERENT THAN WHAT THEY DO NOW.

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### BUT HERE'S THE RUB



THE CLIENTS I'M FAMILIAR WITH LIVE IN FEAR. FEAR OF AUDIT. FEAR OF HACKING. FEAR OF FAILURE.

AND LACK OF TRUST.

THE VERY SAME CLIENTS THAT TELL ME THAT THEY HAVE "THE BEST AND BRIGHTEST" REALLY DON'T.

THEY MAY HAVE A FEW PEOPLE THAT THEY TRUST, ESPECIALLY FOR PRODUCTION FACING CHANGES, BUT FOR THE MOST PART, THEY ARE SO AFRAID OF THE RISKS THAT ARE OUT THERE THAT THEY BECOME RISK ADVERSE IN EVERYTHING.

### DO WE DEVELOP OR COWER IN FEAR?



SIMPLY GETTING PERMISSION FOR TEAMS TO DEVELOP CAN BE A CHALLENGE.

FOR SOME REASON, MANY OF MY CLIENTS TREAT THEIR DEVELOPERS JUST LIKE OTHER INFORMATION WORKERS THAT THEY MAY EMPLOY. FOR SERVICE REPS, FOR EXAMPLE:

- THEY LOCK DOWN DESKTOPS. NOT ALLOWING DEVELOPERS ACCESS TO TOOLS TO ALLOW THEM TO DEVELOP IS PAST MY COMPREHENSION.
- THEY LOCK DOWN INTERNET ACCESS BEHIND SECRET PROXY SERVERS AND VERY SECRET FIREWALLS.
- THIS CAN LEAD TO DEVELOPERS WHO HAVE BETTER LUCK AT HOME, WITH MORE OPEN NETWORKS,
   THAN IN THE OFFICE.
- THIS CAN LEAD TO DEVELOPERS WHO RESORT TO USING VPN SERVERS AND TRANSPARENT PROXIES TO ALLOW THEM TO DO THEIR WORK.
- THIS MAKES THE DEVELOPERS LOOK AND ACT LIKE HACKERS TO SECURITY, WHICH FURTHER EXASPERATES THE PROBLEM!

### DO YOU MANAGE OR DEVELOP?



FROM WHAT I'VE EXPERIENCED, THE ROOT DIFFERENCE I SEE BETWEEN OLD STYLE SILOED AND FEARFUL ORGANIZATIONS AND THOSE THAT EMBRACE DEVOPS CULTURE IS WHETHER THE ORGANIZATION USES MANAGED SERVICES OR NOT.

MANAGED SERVICES MEANS (TO ME):

- TICKETS FOR EVERYTHING.
- TELL US YOUR REQUIREMENTS, WAIT A WHILE, AND WE'LL GET BACK TO YOU WITH A SOLUTION.
- SLAS, SERVICE PORTALS, NOTIFICATION AND ESCALATION PROCEDURES, ETC, ETC...

THIS IS THE ANTHESIS OF DEVOPS, WHETHER THEY MANAGE CLOUD BASED SERVICES OR NOT, BECAUSE OF ALL THE LEAN WASTES THAT COME UP (WAITING, DEFECTS, BATCHING/INVENTORY, OVER-PROCESSING, OVER-PRODUCTION, MOTION WASTE, AND SO ON).

# WHAT WE NEED IS ON-DEMAND INFRASTRUCTURE AS CODE WITH A TOUCH OF GITOPS

- EVERYTHING IS DEFINED DECLARATIVELY (SUCH AS WITH TERRAFORM).
- EVERYTHING IS TESTABLE IN DIFFERENT ENVIRONMENTS (THE SAME SCRIPTS THAT PRODUCE PRODUCTION INFRASTRUCTURE ALSO PRODUCE PRE PRODUCTION, UAC, QA, CI, ETC.)
- THE DIFFERENCES BETWEEN ENVIRONMENTS BECOME PARAMETERS, SUCH AS HOW MANY MACHINES ARE IN A CLUSTER, WHERE THE ENDPOINTS GO TOO, ETC.
- WHEN IN A LOW TRUST ENVIRONMENT, AS FOR EXAMPLE AN ORGANIZATION TRANSITIONING INTO A DEVOPS CULTURE, INSTEAD OF DEVELOPERS COMMITTING CHANGES THAT WILL AFFECT PRODUCTION, THEY CREATE A PULL REQUEST, AND THE RESULTING WORKFLOW ROUTES THE REQUEST TO "OPERATIONS RESPONSIBLE" PEOPLE. (SIDE STORY: IT'S UNREASONABLE TO EXPECT ORGANIZATIONS THAT DON'T TRUST DEVELOPERS ENOUGH TO CHANGE THEIR DESKTOP SCREEN SAVER TIMEOUTS TO ALLOW THOSE SAME DEVELOPERS TO COMMIT CHANGES DIRECTLY TO PRODUCTION!)
- THE "OPERATIONS RESPONSIBLE" PEOPLE REVIEW THE PROPOSED CHANGE, MERGE ANY CONFLICTS, AND COMMIT THE CHANGE, RESULTING IN A CHANGE TO PRODUCTION.
- AS THE ORGANIZATION STARTS TO TRUST DEVELOPERS TO DO THE RIGHT THINGS, THE HOPE IS TO MOVE FROM A GITIOPS WORKFLOW INTO ONE WITH LESS LEAN WASTE WAITING TIME, SO THAT CHANGES MADE BY DEVELOPERS CAN MOVE MORE DIRECTLY INTO PRODUCTION.
- TRUST IS EARNED AND ENGENDERED BY A LEARNING ORGANIZATION.

### SIDE BENEFIT: AUDIT IS FIXED!

- ONE SIDE BENEFIT FROM THIS IS ONE THE AUDIT CONCERN. IN THE US, WE HAVE A LAW CALLED SARBANES-OXLEY THAT WAS PASSED BACK IN 2002 TO RESPOND TO THE SCANDALS FROM ENRON, WORLDCOM, GLOBAL CROSSING, TYCO, AND AUTHUR ANDERSEN.
- ONE SECTION OF THAT LAW IS SECTION 404, WHICH DETAILS THE STEPS THAT A COMPANY MUST COMPLY WITH TO ENABLE AUDIBILITY.
- MOST COMPANIES RESPONDED TO THAT SECTION BY DRAFTING EXTENSIVE STANDARDIZED PROCESSES, REQUIRING A TON OF SIGN OFFS, AND SO ON. READING SOME OF THE DEFINED PROCEDURES FROM COMPANIES THAT I'VE WORKED WITH MADE ME BOTH FURIOUS AS WELL AS GIGGLE (SIDE STORY OF EVEREST CSO).
- THE RESULT WAS THAT WHEN AUDITS OCCURRED, THEY WERE MET WITH THE SAME SORT OF FEAR THAT MANY ORGANIZATIONS I'VE WORKED WITH EXHIBIT WHEN RELEASING CODE (SOMEHOW THEY FORGET THAT RELEASES TO PRODUCTION ARE THE NORMAL AND DESIRED RESULT OF DEVELOPMENT!)
- AUDITORS HAVE QUESTIONS ABOUT WHAT CHANGES OCCURRED WHEN, WHO AUTHORIZED IT, WHAT CONTROLS WERE IN PLACE, ETC
- THE BENEFIT OF USING A PROPER CD APPROACH IS THAT WE CAN DISPENSE WITH THE HUGELY BLOATED AND MOSTLY OUTDATED DOCUMENTS THAT FORM THE STANDARD OPERATING PROCEDURES FOR THESE COMPANIES AND REPLACE THEM WITH TOOLS TO AID THE AUDITORS GET WHATEVER INFORMATION THEY NEED FROM THE LOGS AND REPOSITORIES OF THE TOOLS USED TO IMPLEMENT THE CD PROCESS!
- I'VE WORKED WITH A FEW CHIEF SECURITY OFFICERS FROM COMPANIES THAT WERE DROWNING UNDER SARBANES OXLEY AND NOW WERE SOME
  OF THE MOST VOCAL SUPPORTERS FOR MOVING THE ORGANIZATION KICKING AND SCREAMING INTO THE 21ST CENTURY!

# PRODUCTION INFRASTRUCTURE

#### WHERE THE ACTION IS NOW



THE SET METHINGTO THE "RESET OF THE HEALT" WHEN ET COMES TO WHAT I DO DAY TO BUSY RECORDED.

LUS MOSS RECORDS FOR "DEVOES FRANCIAL" PROMODERACIONES WAR ARE RECORDS

BUT MOST MANUFA MANAGED ING. BECAUSE THEY MANGED RETRORCES FOR SHAREST THEY READ THOM "DEVICES" (COMPANDES AND TOOL SHAMONS, MAD PROMOTE THE SUITE THAT SHAPLY ARROWS A FEW (NOTICE TO A CONTRACT TO A CONTRACT OF A STATE OF A STATE OF A STATE OF A CONTRACT AND A STATE OF A PROBABLY TAGETBEE AND PARMIESSEY. THEY SYROCALLY DON'T WANT TO HEAR TEXT THE PURSUAWENTAL

TADA SANI PROBADI ANI GUNER PRANDESSA NI THE "ALCOF" PRADOS MALANDACIONIS SANI PRANDITI "INTERPORT SCALED ACADE" AT THEIR SPECIALTY, MAND WITH SOME SHALL CHARGES ON PROCESS, compacts messes as at a visus time (appropriate histories bases) from four 1901

#### BUT HERE'S THE RUB



THE CLEENTS I'M FAMILLIAN WEST LEVE IN FRANC FRANCE AUDIT. FEAR OF HACKEIN.

AND LACK OF TRUST

THE SPECK CASE OF THIS THAT THEY ME THAT CHEY MASE "THE BEST AND RESCAUNT IN

THEY MAY BASE A FEW PROPER THAT THEY THIST. PSPECIALLY FOR PRODUCTION. FACING CRANGES, BUT FOR THE MOST PART, THEY ARE SO AFRAID OF THE RISKS THAT ARE OUT TREES THAT THEY RECOME KISK MOVERSE ON EVERYTHING.

#### DO WE DEVELOP OR COWER IN FEAR?



COMPLY LETTING PERMISSION FOR STANS TO DESCRIPT ON BY A DRAW TERM.

THE YORK HAZON, MANY OF MY CLINK'S THEIR SHEET CESTS OFFIS SHEET LINE GODES CHROCKATON MORGES TEST THE MARK SURTON FOR SPRINGS RIPS, FOR EXAMES

- THEY LOCK DOWN DESKTORS: HOS ALL BONDING DOCKTOPRESS ACCESS NO ROODS TO ALL ON THEM TO BEVERAP IS PAST MY COMPATAINISIQUE
- But lock down intensit weeks beading sends proof service and vide scort finances. - THIS CAN LEAD TO SEVELOPERS WHO BUSY BETTER LIBER AT ROME, WITH DOOR OPEN METAVORES
- THAN IN THE OFFICE. - THIS CAN LEAD TO BENTLORERS WHO RESONT TO USENIG THE SERVERS AND TRANSFAMENT MIDNES
- THIS MAKES THE DEVELOPES LOOK AND ACT LIKE HACKERS TO LICENSTY, WHICH PIRTHER
- DARRIANS THE PROBLEMS

#### DO YOU MANAGE OR DEVELOP?



FROM WHAT S'YE ERMELENCED, THE HOURS ALTTERENCE! SEE NETWEEN DED STYLE SILIBED AND PENALTIC ORGANIZATIONS AND TROST THAT PHARME PEPARS COLUMN IS WRETHER THE

PANNAGED SERVICES MEANS (10 ME):

- Text us your registeriems, walt a wille, and we'll get back to you with a
- SLAS, SERVICE PORTALS, MODIFICATION AND ESCALATION PROCESSIVES, EUC, ETC.

THIS IS THE ANTHESIS OF DEVOES, MHETRER THEY MARKES CLOUD BRIED SERVICES ON NOT. RECAUSE OF ALL THE LEAV WASTES SHAT COME OF EMAILTIMS, DIFFECTS, BATCHDOLD IMVENTIONS, EVER-PROCESSING, EVER-PRODUCTION, MOTHER WASTE, AND SOON?

#### WHAT WE NEED IS ON-DEMAND INFRASTRUCTURE AS CODE WITH A TOUCH OF GITOPS

- INTERTROME TO BEFORE BELLAND EVERY (NOTE AS WITH TREMETERS).
- INTERDICES STARE IN DETERMINISMENT FOR MAIL SOUTH THE HOME PROMETON ASSOCIATED FRANK I WE PRODUCTIONS TWO DATES INC.
- THE ADDICADAGES ACTIVITIES CONVERGENCE WITH RECOVER PARAMETERS, SACE ALL HOW HARM MORE HAVE AND OF A LILISTER, WHERE THE ENGROUNCE GO TOO, ESC.
- WIREN ON B LOW PRICE ENVIRONMENT, AS TON EXAMPLE AN ORGANIZATION PRINCETONION ENVIR A DEPRINS EXERTIF, DISTRING OF DEVELOPING CONSCITUTE DANGED THAT WILL ARREST MODERCHAIN, THE COURT A RIAL BOOKET, AND THE RESIDENCE WARRION MARTET THE BOOKET TO "CONTRACTOR: REPROSEDED" RESPUE: The short in Committee of Employment and Address and Novel Street and Respublic and the second THEIR DESIGNATION WAS CHARGED BY WHE CHARGED IN THE COUNTY CHARGE STREET A DAMAGNET OF THE CHARGE STREET.
- THE "INTERATIONS REPROBLEDE" PRIME REVIEW THE PROPOSED (BANGE, MEDIT AND COMPLETE), AND COMMET THE CHANGE, RESPECTIVE TWA CHANGE IS
- At the consumptions of the Charles THE WASTE WATER TIME, SO THAT CAMBLES MIND BY DEVELOPING CAMBRAY ARMS ADMITTED THE PRIMARTION.

#### SIDE BENEFIT: AUDIT IS FIXED

- ONE STON REMETIL FROM THIS IS ONE THE AUDIT CONCERN. ON THE TIS, WE HAVE A DAM CALLED SAMBANES- (DILLY THAT WAS ENSIRD AND IN 2002 TO RESPOND TO THE SCANDALS FROM BRION, WOLLDEDAY, GLOBAL EDUSTINA, TYDO, AND ALTHROUGH ANDERSEM.
- One section of that law it section 40s, which decrees the steps that a company must convey with to enable addibitity
- MOST COMPANIES REPROTRED TO THAT SECTION AT DIRECTION EXTENSIVE STANDARDING PROCESSES, REQUIREMS A TION OF SERVICES, AND SO ON. REACHNS SOME OF THE BETTMEN PROCEDURE FROM COMPANSES THAT I "YE WORKER WITH MADE WE NOTH FRANCES AS WELL AS GROUGE (SIDE STORY OF EVENEST ESD).
- . THE RELIGIOUS THAT WHEN AUTOITS OCCURRED, THEY WHE SHIT WITH THE SAME SOUTH FRANTIAN THAN THAT HOW YOU AND A THAT HOW IS AN ADDRESS. WITH ESHIRIT WHEN HELEASING CODE (SEMENOW DIEY AGREET THAT RELEASES OF PROCESS THOM WHE THE MODIAN. AND DESIRED CENTER OF DEVELOPMENT)
- ADDITIONS NAVIE SYSTEMAN AND IT WHAT CHANGES OCCURRED WHEN, WHO ADDIRECTED IT, WHAT CONTROLS WERE INVENTED. FIRE
- THE MOMENTS OF USING A PROPER CO. APPROXISE IS TRAILINE CONDICIONS WITH THE DIGITY BROADS AND MIGHT OF CONTROL THAT FORM THE STANDARD OPERATION, PROCESSIONS FOR SHELF COMPANIES AND REPLACE SHEW NOTH TIDGS TO ARD THE MINISTERS CAT WANTEYER EMPARABETHIN THEY MEED FROM THE LOSS AND REPOST DUCKS OF THE TORKS JUST TO EMPLOYER THE CO MILLIONS
- Pay assets with a fine and court of incident sectors recovered that are decaying many fastants being and one was their OF THE UNIT YORK I SEMENTIFF TWO MOVEMENT THE ORGANITY STORY FROM THE CORP. MAD STREAMING 1979 THE THE CONTRACT





#### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





#### DEVELOPMENT ENVIRONMENTS







#### DEVELOPMENT INFRASTRUCTURE





#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











#### PRODUCTION INFRASTRUCTURE



Entrant bookses









#### DEVELOPING A LEARNING ORGANIZATION







#### THE TALE FOR THE MISBEGOTTEN





### DEVELOPING A LEARNING ORGANIZATION

#### FINDING A NEW ROLE FOR THE HIPPOS



NOW TO DEVICEOR A LEARNING COLUMITATION. THAT'S PROBABLY THE THOUSEST ESCHOOL ANYTHING DESCRISED THEY FAX, MEANINE THACKS TO THE VERY NEAR THE THE

TO'S BARD RECARDE WE'VE SHEW TANKEN THAT LEADERS, WHO DOLLN'T WARE MORE MORELY THAN THE OTHERS IN THE BOOM, AMESINPOSED TO HAVE THE ANYWERS TO ALL THE OURSTLAND THE THE BALLAMIZATION HE

ST'S THAT BORFO (THEATS) CHAIN PRESENT'S OPHING WE INCOME MAKEUME THAT IS SO

EVENEWER RESERVENCE OF THE RESERVENCE OF THE PROOF WAY TO AD-OTBERNISH WAT DIS TIRST EXPERISHING DIG STREET COMMUNICATION FOR THAT MANCHAL DECISIONS AT THE WINNEY LEVEL.

#### HOW HIPPOS CREATE FEAR



SO, WHELE THERE'S PLENTY OF WORK FOR A PERSON LINE MYSELF TO COACH EDECUTEVES ON THEIR PERSONAL STYLE, ET'S THE REED OF CHREENT TEPPO DICTSTONS INTO THE ORIGINALIZATION THAT REFECTS HIS BUT ON THE HERE AND

YES. WE WELD TO TURN QUE MANAGERS ENTO SPRYANT LEADERS, BUT WE CAN'T WART UNTIL THAT RAIMENS BHODE WE STAKE TO MAKE A CAMAGE FOR

THAT'S RECAUSE ON AN ORGANIZATION WHERE THERE'S FLAR, MOST PROPER WELL RESPOND AN ENTERNALETING THAT A GOOD STRIVENAL STEATHER BS TO STAY DUEFT, LISTEN, AND BO WHAT THEY ARE TOLD TO BG.

AS 16 THAT WILL BELF THEM SURVIVE THE HELT KNOWN OF LANGETS!

#### WHY ORGANIZATIONS HAVE TO FAIL TO SURVIVE



THE MODER LEVEL HERWIST ALL BY THIS IS VERY MISCHAUSE THE MODER LEVEL WERMIST ENGLISHMAN

TRATATIONS FROM THE HOSSIAL COCUMETRY STREET AND LODG AND LEAST TO DESIGNATE WITCHEST OF ANAMASE, ON THE LEASE DESIRED METROLING HE LEASE THE METALLING HE LEASE.

BALES ALL NE MANT TO BO IS KENCT TO GISTORIES DEMAND, AND THE TO COPPETE OR AN EYES SHOULDING. PROFES BY ESTING MANY PROPERTY OF TO BOTHAN, BUT GOODS, TO COSCUPE, WE HAVE TO THIS TREE ADVANCAGE.

ROYANTAGE REWAYS STARTS WE'RE A CAPABILLITY THAT BYREIS BORE'S BOVE.

AS TREET AS TRANSPALLY RECORDS A COMMUNICATIVE MET THE TUBB MOST REPORT AS TRANSPALLA

THERE'S NO WAR (TOUR MORES) FOR HANDINGES TO THE THERE SHYDETS, "JUVE US DIRE HANDWATTERS THAT

CHARTETT BUT THE PROPERTY THE THEFT WERE ON COMMISSION

#### START FARNING BY STARTING TO TRUST



DISPUTED SEET AND TRIBUTED AND THE BARREST OF THAT IT AND CANCEL PROPERTY.

NAMES OF MASS OF THE PARTY SPICE.

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   See Coult say per limitary of Post or Human with a revision of the law reachable. That we have a post of the law of the law reachable.
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- TRIBUL, MISTATA Crosset folde: Tribuntianalisteriit Nethic tolita tribu and iliziteriberkolog, et ny biografiandri dominina. Ny rohina bio bastri libboni, ethi i bastri libboni
- "THAT MICHIGANI MARTINA" (DICKLOCK CONTINUENCE.

  SHID HAVE SEE MICHINI TO LIGHENT HAD LIGHT HOW HIS BOUND AND THAT HOW HOW HE MICHINITATE OF TO WORK HAD HERD AND THAT HAD THE TO WORK HAD HAVE. BY HE MODE FRANCISCO THAT AND THAT HAD THE

#### ENGENDERING INNOVATION



WE'RE NOT THE FIRST PEOPLE THAT HAVE HAD TO BEAL WITH EMGEMBERING IMMONATION AT AN CASAMIZATION AL EFYD

















#### THE CHOICE IS YOURS

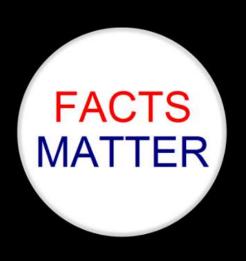


SO MY QUESTEON TO YOU IS NOW CAN WE BE MORE LIKE MERVEN AND LESS LIKE PREDEKTEK TAYLOR, WRO'S LEGACY IN SCIENTIFIC MANAGEMENT IS MOSTLY THE STOPMATCH AND TIME MOTION STUDIES. TAYLOR WAS ONCE DEMONMED BY LEMIN IN 1913 AS "THE SCHINGLED CASSEM OF SWEATENG MORE WORK FROM LABORERS"

WHAT BO WE WANT THE LEGACY FOR OUR OTGANIZATIONS TO BE?

MORE LIKE THE SUMS WHO ARE GREAT EFFICIENT EXTENSIONS OF THEIR MANUFACTURING MACRINES, OR THE GUYS WHO INVENTED THE TRANSISTOR AND REPPED ESTABLESH MODERN TELECOMMUNICATION AND COMPUTING FOR THE AGEST

### FINDING A NEW ROLE FOR THE HIPPOS



HOW TO DEVELOP A LEARNING ORGANIZATION. THAT'S PROBABLY THE THORNIEST ISSUE OF ANYTHING DISCUSSED THUS FAR, BECAUSE IT GOES TO THE VERY HEART OF THE ORGANIZATION'S CULTURE.

IT'S HARD BECAUSE WE'VE BEEN TAUGHT THAT LEADERS, WHO USUALLY MAKE MORE MONEY
THAN THE OTHERS IN THE ROOM, ARE SUPPOSED TO HAVE THE ANSWERS TO ALL THE QUESTIONS
THAT THE ORGANIZATION HAS.

IT'S THAT HIPPO (HIGHEST PAID PERSON'S OPINION) DECISION MAKING THAT IS SO DANGEROUS.

EVIDENCE BASED AND DATA DRIVEN DECISION MAKING IS THE RIGHT WAY TO GO - OTHERWISE YOU ARE JUST EXERCISING OLD STYLE COMMAND AND CONTROL AND MAKING DECISIONS AT THE WRONG LEVEL.

### HOW HIPPOS CREATE FEAR



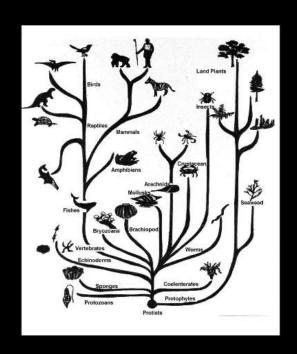
SO, WHILE THERE'S PLENTY OF WORK FOR A PERSON LIKE MYSELF TO COACH EXECUTIVES ON THEIR PERSONAL STYLE, IT'S THE BLEED OF CURRENT HIPPO DECISIONS INTO THE ORGANIZATION THAT AFFECTS US ALL IN THE HERE AND NOW.

YES. WE NEED TO TURN OUR MANAGERS INTO SERVANT LEADERS, BUT WE CAN'T WAIT UNTIL THAT HAPPENS BEFORE WE START TO MAKE A CHANGE FOR THE BETTER!

THAT'S BECAUSE IN AN ORGANIZATION WHERE THERE'S FEAR, MOST PEOPLE WILL RESPOND BY INTERNALIZING THAT A GOOD SURVIVAL STRATEGY IS TO STAY QUIET, LISTEN, AND DO WHAT THEY ARE TOLD TO DO.

AS IF THAT WILL HELP THEM SURVIVE THE NEXT ROUND OF LAYOFFS!

### WHY ORGANIZATIONS HAVE TO FAIL TO SURVIVE



THE WORLD LEVEL VIEW OF ALL OF THIS IS VERY MUCH LIKE THE WORLD LEVEL VIEW OF EVOLUTION.

MUTATIONS FROM THE NORMAL ORGANISM EITHER ARE GOOD AND LEAD TO DOMINANCE BECAUSE OF ADVANTAGE, OR THEY CAUSE THE ORGANISM (AND ALL FUTURE OFFSPRING) TO DIE.

UNLESS ALL WE WANT TO DO IS REACT TO CUSTOMER DEMAND AND TRY TO COMPETE ON AN EVER SHRINKING PROFIT BY DOING WHAT EVERYONE ELSE IS DOING, BUT DOING IT CHEAPER, WE HAVE TO FIND THAT ADVANTAGE.

ADVANTAGE ALWAYS STARTS WITH A CAPABILITY THAT OTHERS DON'T HAVE.

AS THAT ADVANTAGE BECOMES A COMMODITY, WE HAVE TO FIND ANOTHER ADVANTAGE.

THERE'S NO WAY (THAT WORKS) FOR MANAGERS TO TELL THEIR REPORTS, "GIVE ME TWO INNOVATIONS THAT WILL PROPEL US TO THE NEXT LEVEL BY TUESDAY!"

CREATIVITY AND INNOVATION JUST DON'T WORK ON COMMAND.

### START LEARNING BY STARTING TO TRUST

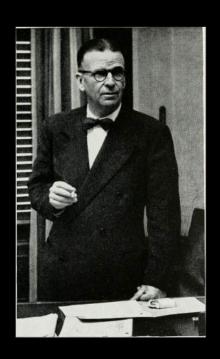


SO, HOW DO YOU GET YOUR ORGANIZATION TO BECOME A LEARNING ORGANIZATION? [SIDE STORY: SIGNAGE DOESN'T DO IT. SIGNS ALL OVER BAYER EXTOLLING SCIENCE AND KNOWLEDGE, WITH EXULTATIONS TO EXPERIMENT AND LEARN. BUT MESS UP AND DON'T MAKE THE DATES OR THE NUMBERS ONCE, AND IT'S OFF TO THE GALLOWS FOR YOU!]

I'D HAVE TO SAY THAT IT STARTS WITH TRUST.

- HIRE EXCELLENT PEOPLE AND TRUST THEM.
- DON'T HIRE JUST BECAUSE OF PAST EXPERIENCE WITH A PARTICULAR TOOL OR FRAMEWORK. THAT SORT OF STUFF CHANGES ALL THE TIME. [SIDE STORY: I STARTED PROGRAMMING COMPUTERS 5] YEARS AGO, AND I'M PROUD TO SAY THAT I'M STILL LEARNING NEW AND BETTER WAYS TO PROGRAM!]
- HIRE PEOPLE THAT CAN LEARN. TEST THAT AS PART OF THE INTERVIEW PROCESS. FORGET ABOUT THE RESUME AS MUCH AS POSSIBLE.
- GIVE PEOPLE THE OPPORTUNITIES TO LEARN. THAT MEANS BOOKS, COURSES, CONFERENCES, BUDGET FOR BUYING THINGS, AND SO ON.
- CELEBRATE FAILURE. I ALMOST MEAN LITERALLY! WE TEND TO EXTOL THOSE WHO FIGURE SOMETHING OUT, BUT TRY TO SWEEP FAILURES UNDER THE RUG. TRY TO FIND THAT NUGGET OF LEARNING, EVEN IF WHAT WE LEARN IS "THAT WAS A DUMB IDEA." EDUCATION COSTS MONEY.
- FIND WAYS FOR PEOPLE TO CONNECT AND LEARN FROM ONE ANOTHER. ESPECIALLY FROM PEOPLE THEY ARE NOT USED TO WORKING WITH. AS IN THOSE HACKATHONS I SPOKE ABOUT EARLIER.

### ENGENDERING INNOVATION



WE'RE NOT THE FIRST PEOPLE THAT HAVE HAD TO DEAL WITH ENGENDERING INNOVATION AT AN ORGANIZATIONAL LEVEL.

I DRAW A LOT OF INSPIRATION FROM MERVIN KELLY.

#### LIFE AT BELL LABS



NECOMMINATING AS A PRINCIPLAT AN THE BIMPHRISTRY OF EMCANA-BIS THE ANY SER WAS BEARTS WILLIAMS (THE THIT WIND LEVEND THE OUT EMPRESAMENT TO MEASURE THE EXPERITING CRASES ENT THE ETECTION).

BY 1525, MERVIN WENT TO BELL LABS, AND ROSE FROM RESEMBLER TO CONTINUAN OF THE BOARD.

IDS HIMMANINVAL MELIF WAS HAT AN "LINSTEDIES OF CHARTING TICPHOLOSA" RECIED A "CRUSTLEAL MASS" OF TALEMTEN PROFILE TO FOSTER A BUSY EXCHANACE OF IDEAS.

#### PHYSICAL PROXIMITY WAS KEY TO MERVIN



BUT DANS A TOOL ROOT REPORT AND WORD THAN THEIR WAS TO INCLUDED THAT THE POST AND ROOM OF THE WORLD WAS TO INCLUDE THE WORLD OF THE POST AND THE POS

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LINE A CONSECUENT CONSECUENT, HE CASACE A MARKAME, AND CONSECUENT O TRACERO, RESERVACIONE CONCEPTIONES, REVOLUE MECHANISMO AND DEVELOPES, AND RESERVACIONES DECORRANCE.

#### LIKE A MAGNET ROLLING PAST TRON FILINGS



DAS SPRECIOUS TEORENS OF ALS APPROACH WAS ARCHITECTURAL

BY PERSONALLY FILM IN BYSION WE WILL DING IN MINIMAY THE ,  $R_{\rm c}$  , where of the limit in the inverse interval in the properties.

Some of the excession the repellipoing while designed no be to consist at to cook down their constrikating set the find desamplar at a vanishing nodine.

PRANTE ING THE BRIET'S HANGTO WITHOUT ENVIOLENTED BY A MARKET OF ACCUMPATION OF, POSITION, OCCUPATIONS AND IDEAS AND ALMOST INFONTING.

APPROXEST ON RESPONDED UNDER IN THE CAPETREA WAS LIKE A MAKENET ROLLING MICH FROM ELEMBER.

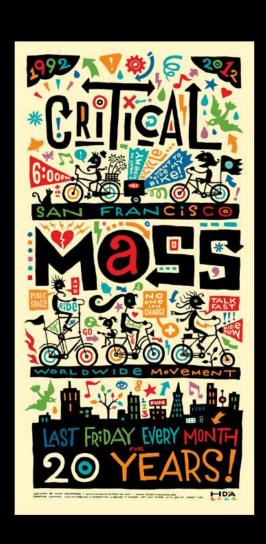








### LIFE AT BELL LABS



MERVIN TRAINED AS A PHYSICIST AT THE UNIVERSITY OF CHICAGO. HIS PHD ADVISOR WAS ROBERT MILLIKAN (THE GUY WHO DEVISED THE OIL DROP EXPERIMENT TO MEASURE THE ELEMENTAL CHARGE ON THE ELECTRON).

BY 1925, MERVIN WENT TO BELL LABS, AND ROSE FROM RESEARCHER TO CHAIRMAN OF THE BOARD.

HIS FUNDAMENTAL BELIEF WAS THAT AN "INSTITUTE OF CREATIVE TECHNOLOGY" NEEDED A "CRITICAL MASS" OF TALENTED PEOPLE TO FOSTER A BUSY EXCHANGE OF IDEAS.

### PHYSICAL PROXIMITY WAS KEY TO MERVIN



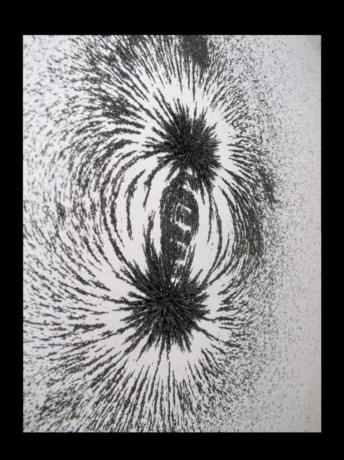
BUT INNOVATION REQUIRED MUCH MORE THAN THAT. MERVIN WAS CONVINCED THAT PHYSICAL PROXIMITY WAS EVERYTHING; PHONE CALLS ALONE WOULDN'T DO.

SO, QUITE INTENTIONALLY, BELL LABS HOUSED THINKERS AND DOERS UNDER ONE ROOF.

WHEN BELL LABS WAS DEVELOPING THE TRANSISTOR, HE MADE SURE THAT PHYSICISTS, METALLURGISTS AND ELECTRICAL ENGINEERS WERE ALL SIDE BY SIDE SO THEORY, EXPERIMENTATION AND MANUFACTURING COULD COME TOGETHER.

LIKE A CONCERT HALL CONDUCTOR, HE SOUGHT A HARMONY, AND SOMETIMES A TENSION, BETWEEN SCIENTIFIC DISCIPLINES; BETWEEN RESEARCHERS AND DEVELOPERS; AND BETWEEN SOLOISTS AND GROUPS.

### LIKE A MAGNET ROLLING PAST IRON FILINGS



ONE SURPRISING ELEMENT OF HIS APPROACH WAS ARCHITECTURAL.

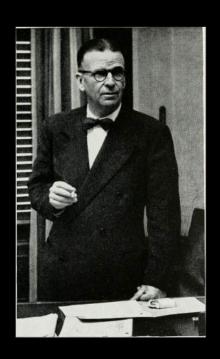
HE PERSONALLY HELPED DESIGN THE BUILDING IN MURRAY HILL, N.J. WHICH OPENED IN 1941, WHERE EVERYONE WOULD INTERACT WITH ONE ANOTHER.

SOME OF THE HALLWAYS IN THE BUILDING WERE DESIGNED TO BE SO LONG THAT TO LOOK DOWN THEIR LENGTH WAS TO SEE THE END DISAPPEAR AT A VANISHING POINT.

TRAVELING THE HALL'S LENGTH WITHOUT ENCOUNTERING A NUMBER OF ACQUAINTANCES, PROBLEMS, DIVERSIONS AND IDEAS WAS ALMOST IMPOSSIBLE.

A PHYSICIST ON HIS WAY TO LUNCH IN THE CAFETERIA WAS LIKE A MAGNET ROLLING PAST IRON FILINGS.

### ENGENDERING INNOVATION



WE'RE NOT THE FIRST PEOPLE THAT HAVE HAD TO DEAL WITH ENGENDERING INNOVATION AT AN ORGANIZATIONAL LEVEL.

I DRAW A LOT OF INSPIRATION FROM MERVIN KELLY.

#### LIFE AT BELL LABS



NECOMMINATING AS A PRINCIPLAT AN THE BIMPHRISTRY OF EMCANA-BIS THE MOVISOR WAS BEGREV MOLLEARN (THE FUT WIND EPTISED THE OUL PRINCIPLATION OF MEASURE THE EXPERIENCE CRASE EM THE ETECTION).

BY 1525, MERVIN WENT TO BELL LABS, AND ROSE FROM RESEMBLED CONTINUES OF THE BOARD.

IDS HIMMANINVAL MELIF WAS HAT AN "LINSTEDIES OF CHARTING TICPHOLOSA" RECIED A "CRUSTLEAL MASS" OF TALEMTEN PROFILE TO FOSTER A BUSY EXCHANACE OF IDEAS.

#### PHYSICAL PROXIMITY WAS KEY TO MERVIN



BUT DANSANDON ROCKRO MACHINOS TRANSPOR NORTE ANA CONTURCIO RALL NO DELO ROCCIOTO NOE REPUBBLICA PROMETANA MORE MORE MACHINE DA

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NORS TO LAKE AND HATHATHE THE TRACETOR AS MICE SHE THAT ATTEMENT, Retroughly and received in a fact of the all sale as the as extremental various and analysis from the forest out.

LINE A CONSECUENT CONSECUENT, HE CASACE A MARKAME, AND CONSECUENT O TRACERO, RESERVACIONE CONCEPTIONES, REVOLUE MECHANISMO AND DEVELOPES, AND RESERVACIONES DECORRANCE.

#### LIKE A MAGNET ROLLING PAST TRON FILINGS



DAS SPRECIOUS TEORENS OF ALS APPROACH WAS ARCHITECTURAL

BY PERSONALLY FILM IN BYSION WE WILL DING IN MINIMAY THE , IT WHEN OF THE DOMESTIC , WHERE EXTENDED MAKES INTERACT MINIOR PROBLEM.

Some of the excession the repellipoing while designed no be to consider to coos deat to coos death of a vanisher notice.

PRADRILIMO DE REGISTA FRACTO WITTERET REACCIONTRICINA A MARGER CO Micharmances, poderna, compesiona and obera bas almost impostible

APPROXECT ON ALLWAY TO LUNCH IN THE CAPETELLA WAS LIKE A MAKENET ROLLING MYT HOMETHORICS.









### THE CHOICE IS YOURS



SO MY QUESTION TO YOU IS HOW CAN WE BE MORE LIKE MERVIN AND LESS LIKE FREDERICK TAYLOR, WHO'S LEGACY IN SCIENTIFIC MANAGEMENT IS MOSTLY THE STOPWATCH AND TIME MOTION STUDIES. TAYLOR WAS ONCE DENOUNCED BY LENIN IN 1913 AS "THE SCIENTIFIC SYSTEM OF SWEATING MORE WORK FROM LABORERS".

WHAT DO WE WANT THE LEGACY FOR OUR ORGANIZATIONS TO BE?

MORE LIKE THE GUYS WHO ARE GREAT EFFICIENT EXTENSIONS OF THEIR MANUFACTURING MACHINES, OR THE GUYS WHO INVENTED THE TRANSISTOR AND HELPED ESTABLISH MODERN TELECOMMUNICATION AND COMPUTING FOR THE AGES?

### DEVELOPING A LEARNING ORGANIZATION

#### FINDING A NEW ROLE FOR THE HIPPOS



NOW TO DEVICEOR A LEARNING COLUMNIZATION. THAT'S PROBABLY THE TROUBLEST ESCHOOL ANYTHING DESCRISED THEY FAX, MEANINE THACKS TO THE VERY NEAR THE THE

TT'S BARD BY MITH WE'VE BEEN TANKET THAT LEADERS. WHO I SUM IT MAKE MORE MORELY THAN THE OTHERS IN THE BOOM, AMESINPOSED TO HAVE THE ANYWERS TO ALL THE OURSTLAND THE THE BALLAMIZATION HE

ST'S THAT REPORTED FALL PRESENT'S OPEN DRAFT DECISION MUNICIPAL THAT IS SO

EVENEWER RESERVENCE OF THE DESIGNATION OF THE PERSER WAY TO AD-OTBERNISH WAT DIS TIRST EXPERISHING DIG STREET COMMUNICATION FOR THAT MANCHAL DECISIONS AT THE WINNEY LEVEL.

#### HOW HIPPOS CREATE FEAR



SO, WHELE THERE'S PLENTY OF WORK FOR A PERSON LINE MYSELF TO COACH EDECUTEVES ON THEIR PERSONAL STYLE, ET'S THE REED OF CHREENT TEPPO DICTSTONS INTO THE ORIGINALIZATION THAT REFECTS HIS BUT ON THE HERE AND

YES. WE WELD TO TURN QUE MANAGERS ENTO SPRYANT LEADERS, BUT WE CAN'T WART UNTIL THAT RAIMENS BHODE WE STAKE TO MAKE A CAMAGE FOR

THAT'S RECAUSE ON AN ORGANIZATION WHERE THERE'S FLAR, MOST PROPER WELL RESPOND AN ENTERNALETING THAT A GOOD STRIVENAL STEATING IS TO STAY DUEFT, LISTEN, AND BO WHAT THEY ARE TOLD TO BG.

AS 16 THAT WILL BELF THEM SURVIVE THE HELT KNOWN OF LANGETS!

#### WHY ORGANIZATIONS HAVE TO FAIL TO SURVIVE



THE MODER LEVEL HERWIST ALL BY THIS IS VERY MISCHAUSE THE MODER LEVEL WERMIST ENGLISHMAN

TRATATIONS FROM THE HOSSIAL COCUMETRY STREET AND LODGE AND LEAST TO COMMISSION FOR ANY OF ANAMASE, ON THE LEASE DESIRED METROLING HE LEASE THE METALLING HE LEASE.

BALES ALL NE MANT TO BO IS N'ACT TO GISTORIES DEMAND, AND THE TO COPPETE OR AN EYES SHOULDING. PROFES BY ESTING MANY PROPERTY OF TO BOTHAN, BUT GOODS, TO COSCUPE, WE HAVE TO THIS TREE ADVANCAGE.

ROYANTAGE REWAYS STARTS WE'RE A CAPABILLITY THAT BYREIS BORE'S BOVE.

AS TREET AS TRANSPORTED FOR THE PERSONAL PROPERTY AS TREET AS TRANSPORTED AS TRAN

THERE'S NO WAR (TOUR MORES) FOR HANDINGES TO THE THERE SHYDETS, "JUVE US ONE HANDWATCHIS THAT

CHARTETT BUT THE PROPERTY THE THEFT WERE ON COMMISSION

#### START FARNING BY STARTING TO TRUST



DISPUTED BEET BOOT TO HART OF BUSINESSET, AND IT NOT TO SECURICAL PROPERTY.

NAMES OF MASS OF THE PARTY SPICE.

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   See Coult say per limitate of Post not used a revisit of the law revisions. That we say that
- CONTRACTOR DESCRIPTION OF STANK THAT IS NOT THE PARTY OF STREET, ASSOCIATED BY
- TRIBUL, MISTATA Crosset folde: Tribuntianalisteriit Nethic tolita tribu and iliziteriberkolog, et ny biografiandri dominina. Ny rohina bio bastri libunda, ethi i bastri libund
- "THAT MICHIGANI MARTINA" (DICKLOCK CONTINUENCE.

  SHID HAVE SEE MICHINI TO LIGHENT HAD LIGHT HOW HIS BOUND AND THAT HOW HOW HE MICHINITATE OF TO WORK HAD HERD AND THAT HAD THE TO WORK HAD HAVE. BY HE MODE FRANCISCO TO WORK HAD HAVE.

#### ENGENDERING INNOVATION



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#### ON REQUIREMENTS GATHERING



#### WHAT ABOUT PLANNING?





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#### ON CODING PRACTICES







#### LET'S TALK ABOUT TESTING











### PRODUCTION INFRASTRUCTURE











#### DEVELOPING A LEARNING ORGANIZATION









#### THE TALE FOR THE MISBEGOTTEN





# THE TALE FOR THE MISBEGOTTEN

#### WHAT'S WITH THE REFERENCE IN THE PRESETATION'S NAME?



AS I REFLECT ON MY JOURNEY AS AN AGILE COACH AND THE TWISTS AND TURNS OVER THE YEARS AS I'VE WORKED THIS ROLE, IT SOMETIMES FEELS THAT I'M A CHARACTER IN THE CLASSIC EUGENE O'NEILL PLAY CALLED "A MOON FOR THE MISBEGOTTEN".



THE PLAY CENTERS AROUND AN CYNTCAL ALCOHOLIC WHO LIVES IN CONNECTICUT AND HAS LONG STANDING MOTHER ISSUES, STBLING ISSUES, AND NEIGHBOR ISSUES.

#### NOSTALGIC FOR AN OLD FRIEND



Well, I bon't replet brend, but robetines I fee outste endem, bot of in the Andy Righey way (a commune on "A) Minimes", favous for est "A few Mendies werd andy Robey" stanent root the late 1708 to the late 2008. J

TO GET TO KNOW ANDY, TAKE A LOOK AT "ANDY DOTTLES EAU DE BRONKY", WHERE HE Salteneally eins arbet the trend trong using lar water to bothed water in the UK

AS TASE, TIGHTA SENSE HAS TIFE RECORD THE SAME SIGHT OF EXAMPTION DRAW THAT MADY HAS, DELEY INSTRUMENT OF EMANAGEMENT AND HAVE THE OFF MORE AND ALL JUSTS OF OTHER TOTERANT TOURS STRUMENT EMANAGE OF ON THE WINSEL IN THE MORE WINDLE. IT MAINTER AROUS THAN SOTTWARD EMERGEMENT HAS JUSTS OFFEN TO THE LOOS."

I FEEL THAT I SHARE A LOT WITH ANDY, AND MISSING COMMENTARY A 201

#### FIGHTING THE GOOD FIGHT

END THAT THERE IS AND THE SAND THE SAND THE SAND OFFICE AND OVER METANDLED PROCESS FOR SECTIONS DEVELOPMENT AND CHROMOUTH AND CHROMOUTH AND THAT SERVING THE SANDARD REPER ONES, THAT CHROSS OFFI METANGED HER. THE SANDARD AND CHROMOUTH AND THE SANDARD HER SAND

BUT THE PASSIONALESY ABOUT THES. AND THAT'S WAY I'VE COME SO FAUNTEE TO SHARE THES PASSION WITH YOU

BECAUSE WE'LL LOSE SOMETHING EMPORTANT OF METALL TO REMEMBER WHAT'S BEAULY DIPORTANT ON OUR FEED AND FEER TO KEEP THE Flade alive.

AS LETS ESTANCE, THEIR THAN DETORY IS THE MEMILIKATION THAT THROUGHER LETP OND MECHANIZATE SOFTWARE REPUTED HAND AND Princess is nothing wher wark as each than manasters a good responsing the tendous of the solds and apprecises that they share

WE HIST STAMP STRONG AND FIGHT THE GODD FEGRT!

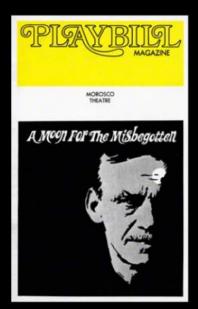
SO LONG, AND THANKS FOR ALL THE FISH QUESTIONS.

ANSWERS.

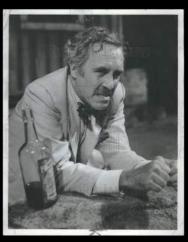
DEBATE.

DEPART.

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### NOSTALGIC FOR AN OLD FRIEND



WELL, I DON'T REALLY DRINK, BUT SOMETIMES I FEEL QUITE CYNICAL, SORT OF IN THE ANDY ROONEY WAY (A COMMENTER ON "60 MINUTES", FAMOUS FOR HIS "A FEW MINUTES WITH ANDY ROONEY" SEGMENT FROM THE LATE 1970S TO THE LATE 2000S.)

TO GET TO KNOW ANDY, TAKE A LOOK AT "ANDY BOTTLES EAU DE ROONEY", WHERE HE SATIRICALLY RIPS APART THE TREND FROM USING TAP WATER TO BOTTLED WATER IN THE US.

AS I AGE, I GET A SENSE THAT I'VE BECOME THE SAME SORT OF CRABBY OLD MAN THAT ANDY WAS, EXCEPT INSTEAD OF BEMOANING ABOUT HOW WRITING (AND ALL SORTS OF OTHER EVERYDAY THINGS) HAVE CHANGED FOR THE WORSE IN THE MODERN WORLD, I WHINE ABOUT HOW SOFTWARE DEVELOPMENT HAS "JUST GONE TO THE DOGS."

I FEEL THAT I SHARE A LOT WITH ANDY, AND MISS HIS COMMENTARY A LOT.



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### FIGHTING THE GOOD FIGHT

I'M SURE THAT IF ANDY EVER SAW THE INDUSTRIALIZED AND OVER MECHANIZED PROCESS FOR SOFTWARE DEVELOPMENT AND DEPLOYMENT THAT'S BECOME THE STANDARD THESE DAYS, I THINK THE CURMUDGEON IN US BOTH WOULD SAY SOMETHING LIKE, "DID YOU EVER NOTICE THAT THINGS USED TO BE DIFFERENT BACK IN THE DAY, WHEN WE DID BETTER, WERE HAPPIER, AND DIDN'T HAVE ALL THOSE SOFTWARE DEVELOPMENT TOOLS, PROCESSES, CERTIFICATIONS, AND THE LIKE?"

BUT I FEEL PASSIONATELY ABOUT THIS, AND THAT'S WHY I'VE COME SO FAR HERE TO SHARE THIS PASSION WITH YOU.

BECAUSE WE'LL LOSE SOMETHING IMPORTANT IF WE FAIL TO REMEMBER WHAT'S REALLY IMPORTANT IN OUR FIELD AND FIGHT TO KEEP THE FLAME ALIVE.

AT IT'S ESSENCE, I FEEL THAT DEVOPS IS THE REALIZATION THAT INDUSTRIALIZED AND MECHANIZED SOFTWARE DEVELOPMENT TOOLS AND PROCESSES IS NOTHING MORE THAN A SCAM THAT MAKES FOR A GOOD BUSINESS FOR THE VENDORS OF THE TOOLS AND PROCESSES THAT THEY HAWK.

WE MUST STAND STRONG AND FIGHT THE GOOD FIGHT!

# SO LONG, AND THANKS FOR ALL THE FISH

QUESTIONS. ANSWERS. DEBATE. DEPART.

# THE TALE FOR THE MISBEGOTTEN

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TO GET TO KNOW ANDY, TAKE A LOCK AS "ANDY BOTTLES EAU DE ROOMLY", MARKE HE Saterically guys arres the trend thom using lay water to bottled water in the Tis

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FOR THAT I SHARE A LOT WITH AND MAIN MISSING COMMENTARY ADDS

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#### THE TALE FOR THE MISBEGOTTEN





### PIVOTING A COMPANY TOWARDS GITOPS AND CONTINUOUS DELIVERY

A TECHNICAL PRACTICES COACH'S TALE FOR THE MISBEGOTTEN



