

# 100 Lessons Learned for Project Managers

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## An *Epic* Implementation Perspective

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In February 2013, we began weekly mailings of Project Management learnings first compiled at NASA. Subscription grew with time, as did the scope of the mailings. The below compiles previous lessons shared with an installer's thoughts on how they apply to life and work at *Epic*.

After 18 months, some of the original lessons were difficult to relate, but you can reference the original list here:

[https://www.nasa.gov/pdf/293253main\\_62682main\\_jerry\\_madden\\_forum7.pdf](https://www.nasa.gov/pdf/293253main_62682main_jerry_madden_forum7.pdf)

**2.** Most equipment works "as built," i.e., not as the designer planned. This is due to layout of the design, poor understanding on the designer's part, or poor understanding of component specifications. (8/15/14)

Word vomit... We've both experienced someone trying to illustrate a point by just letting words fall out of their mouth.

The phrase is inelegant, but it accurately describes the clarity of the picture the receiver takes away.

Pretending for a moment that we've only ever offered brief, simple, and precise directives, having done so does not allow us to dictate and drop out.

Communication failures happen, even when you're careful. As a project manager, it's on you to monitor progress and control variances in accuracy and quality. So, remain involved and communicate constantly, or be prepared for someone to quote *Cool Hand Luke*.

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**3.** The source of most problems is people but damned if they will admit it. Know the people working on your project, so you know what the real weak spots are. (4/11/14)

On your projects, you'll find personalities scattered across the spectrum.

You will have analysts who do without thinking, and others who only think about doing.

You will find CIOs and Directors who drive project direction by blunt, combative imperatives, and others who guide through subtle, Socratic questions.

You will have an IC who just cannot stop micromanaging.

You will also have an IC who trusts too much and is too hands-off.

There will be times you need a message carried to Garcia, and times you need strict adherence to explicit direction.

It's a requirement to carry soft skills in your toolbox. You will not have the perfect personality within your team for every task that needs doing, so aim to be interpersonally astute and collect an accurate impression of all team members' habits, standards of work, nonverbal cues, and work ethic. Choose to ignore these indicators at the project's - and your own - peril.

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**4.** Most managers succeed on the strength and skill of their staff. (8/2/13)

As a Project Manager, understand how to distribute work to maximize benefits gained through the team's collective strengths as well as mitigate risks posed by overall weaknesses. The directive to perform the task(s) might come from your customer counterpart PM or a functional manager, but you must understand the best deployment of efforts – which means you need in-depth knowledge of each individual's skill levels.

Further, it is our responsibility to guide and grow customer analysts in these projects. Not news.

If you find sub-par quality or a struggling team member, it's not your job to simply fix it but to help them understand the situation and remedy their perceived and/or actual weaknesses: teach them to "fish" in relation to the project and long-term success.

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**5.** A manager who is his own systems engineer or financial manager is one who will probably try to do open heart surgery on himself. (5/16/14)

You've heard similar phrases and sentiments before, and probably so many times that this now sounds pedestrian. Good judgment comes from experience, and sometimes that experience is hard won by surviving bad judgments. Taking on too much yourself can lead to poor quality or failure, so trust the specialized expertise of your team. Take advantage of others' experience to prevent repetition of their past mistakes.

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**9.** Never undercut your staff in public, i.e. don't make decisions on work that you have given them to do in public meetings. Even if you direct a change, never take the responsibility for implementing away from your staff. (12/20/13)

Show trust to your team.  
I'm not saying you should employ foolish optimism by throwing blind faith at a proven promise breaker, but you can little afford an absence of trust.  
You need a team that will speak truth even if it opposes popular opinion, alert others to smoke on the horizon, and volunteer expertise to lead. Who will step forward if you offer them opposite of public support?

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**13.** A project manager should visit everyone who is building anything for his project at least once... People like to know that the project manager is interested in their work, and the best proof is for the manager to visit them and see firsthand what they are doing. (2/21/14)

You might see yourself as a normal, everyday person, but within the project your role carries importance.

To IT counterparts you are the expert: a source of guidance and authority whose attention holds value beyond the time spent.

To operational managers and stakeholders you are a symbol of the gravity of the implementation, the change directly affecting lives.

Spend time showing interest in the work of others on the project. Everyone desires recognition for their work, and it means a good deal when received.

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**14.** Never ask management to make a decision that you can make. Assume you have the authority to make decisions unless you know there is a document that states unequivocally that you cannot. (5/24/13)

With the projects we engage in, this isn't always an option - - sometimes critical decisions do turn out to have life or death consequences. But, where you can cut through the red tape to save time and money, solve problems, maximize benefits, or mitigate risks; show some initiative and shake a leg.

AC: Is it okay if I have the team build a prototype for testing, then record findings for the decision document by Friday?  
AM: <sigh>

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**15. Wrong decisions made early can be salvaged, but "right" decisions made late cannot.** (8/23/13)

I'm telling you thusly: *Don't shortcut on testing.*

It's not a perfunctory nod of the head on the way to go-live. You should find issues requiring significant time, effort, and skill to solve, and without adequate time dedicated to remedy and retest, your go-live is at risk. If you don't find these critical types of issues, your testing was terrible.

Second, expectations and assumptions are decisions. Assumptions can be necessary and helpful, but they can also be insidious artifacts lingering from mistaken impressions. Document all assumptions to ensure clarification, and if you find a false or inappropriate expectation it is your job and responsibility to correct it.

Your operational director thinks it's the right move to double-down on 19? You better speak up.

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**16. Never make excuses; instead, present plans of actions to be taken.** (4/12/13)

App Alerts, Yellow Flags, Red Flags, camping outside of certain offices... If something like that is involved, and your mind is running through why it's not my fault instead of what I need to do to make things right, then you need to take a breath before speaking.

First, think about it: if a problem is dumped in your lap by someone, and that person didn't first apply any critical thinking or objective analysis, what's your first reaction?

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**17. Never try to get even for some slight by another on the project. It is not good form -- it puts you on the same level as the other person--and often ends up hindering the project getting done.** (10/11/13)

You've probably been thrown under the bus before, or perhaps had someone pass your idea or achievement off as their own.

Refrain from being petty, remain professional, suck it up, and move on. In the long run, inadequacies come to light and your track record of successes will win out... That's what you should want to be known for instead of spite.

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**18. If you cultivate too much egotism, you may find it difficult to change your position -- especially if your personnel tell you that you are wrong. You should instill an attitude on the project whereby your personnel know they can tell you of wrong decisions.** (8/30/13)

Good ideas can come from anywhere.

Being the smartest person in the room does not make you right. (Smart people already know this.)

If you haven't cultivated an environment of open exchange and idea sharing within the project, or pride backs you into a corner, any success is not all together yours but all failures certainly are.

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**19. One of the advantages of NASA in the early days was the fact that everyone knew that the facts that we were absolutely sure of could be wrong.** (6/17/13)

It's something we're working on as a division: the Foundation System isn't the only way, and sometimes blanket recommendations are simply not the right way under a specific set of circumstances.

That workflow recommendation about which you're absolutely confident... Why are you confident? Because you can articulate the pitfalls and consequences of Option B, or because you don't know about Option B?

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**20.** Managers who rely on the paperwork to do the reporting of activities are known failures.

(4/25/14)

You could take from this that project managers not engaged in the day-to-day details are out of touch, a risk to the project. That view is a truth: they are indeed.

If exposure to the project's challenges and successes is limited to shuffling data points from a status report to the progress report, do not be surprised if your impression of events is wrong... You should be less surprised when others consuming your status updates turn to you for answers in the case of failure.

But, you also need to know that status reports, progress reports, meeting notes, and the like are not always the correct tools. Yes, if something is important it should be in writing. If it's important, though, you should also be talking about it – whether good or bad – to make sure you communicate appropriately... Get the right people the right message with the right emphasis at the right time. It won't fly if there's an issue and your only defense of the escalation is: *well, I put it in the progress report.*

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**21.** Not all successful managers are competent and not all failed managers are incompetent. Luck still plays a part in success or failure, but luck favors the competent, hard-working manager.

(2/28/14)

There are always factors in play that you cannot control. Should a problem arise, your willingness to pull people together, build a plan, and set that plan in motion will help see you through.

If you merely shrug your shoulders from the sidelines and trust in luck... well, that's when we end up with 34 minutes of underwhelming, unprepared awkward commentary during a Super Bowl blackout.

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**22.** If you have a problem that requires the addition of people to solve, you should approach recruiting people like a cook who has under-salted, i.e., a little at a time.

(11/8/13)

The effort required to coordinate a group scales with the number of individuals involved. Throwing a large number of people at a problem results in a lot of overhead and expense up front without evidence of the direct impact any one individual might have on the problem.

As project manager, you should be on the lookout for problems holding potential to grow. Monitoring the situation, you should know when something is outside of acceptable limits and take early action – which might include asking for help – before it's an emergency. Hence, modest application of additional people should be all that's required.

*Do not cry havoc, where you should but hunt  
With modest warrant.*

Bill Shakespeare, honorary PMP

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**25.** Know the resources of your center and if possible other centers. Other centers, if they have the resources, are normally happy to help. It is always surprising how much good help one can get by just asking. (1/17/14)

There is a phrase that makes its way through our circle, explained to me by someone who was told the same by another:

*The chance of getting what you want or need increases dramatically if you ask.*

Asking for help is a remarkable thing.

Asking for help shows that you are not ignorant to recognizing when you need it, nor are you so stubborn as to hide that need.

And if help should be asked of you, foster community. When appropriate, the asking and lending of help allows us to build community strength rather than let circumstance exploit individual weakness.

One of the most gorgeous examples of soul-lifting syncopation doesn't come from a plea to ignore help when sought or offered...

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**27.** Documentation does not take the place of knowledge. There is a great difference in what is supposed to be, what is thought to have been, and what the reality is. Documents are normally a static picture in time which is outdated rapidly. (3/8/13)

*Originally sent without comment*

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**28.** Remember who the customer is and what his objectives are, i.e., check with him when you go to change anything of significance. (5/30/14)

Sound a little bit like common sense? I sincerely hope so.

Acumen insists adherence to this maxim. If you make a significant unilateral decision on behalf of the project without approval of the customer, I wish you luck in your future career.

However, this lesson is also a subtle nudge toward common sense.

Little else is so refreshing as the liberal application of common sense to complex problems in the midst of the kitchen heat.

Project management seems like common sense... Much of it is. It's when the heat is on that we need to remember common sense. Lean staffed with two pending departures and additional scope in question? You might talk yourself into believing it can be done, but common sense face palms at your naiveté.

*Common sense is not so common. –Voltaire*

*Common sense is genius dressed in its working clothes. – Ralph Waldo Emerson*

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**30.** Remember the boss has the right to make decisions, even if you think they are wrong. (8/22/14)  
Tell the boss what you think but, if he still wants it done his way, do your best to make sure the outcome is successful.

I've intended to send this lesson today for some time now. After introducing a new, similar company principle earlier this year, I held off.

*Dissent when you disagree; once decided, support.*

I believed it would take us ~10 months to make it back around to this principle at the Staff Meeting, but... nope. Dang if Carl doesn't reiterate it this week.

The two ideas expressed here are clear. It is your responsibility to fight for what you feel is the right decision, and if the world doesn't go your way, it is your responsibility to back the team with your fullest efforts.

First, we only hire smart people because we expect you to employ those smarts in critical fashion to solve problems and develop solutions. If you don't drive, and drive, and drive for what you feel is right, you're not doing your job. Second, again, we only hire smart people, so there is a deep reserve of great ideas and solutions beyond the one you think best. If you don't recognize that, or withhold your best work from the team because they're not taking your idea, you're still not doing your job.

As a project manager, your job is to facilitate collaboration – to build and manage a team that works together with a focused effort to effect the best possible outcome for an end-state goal.

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**32.** Don't be afraid to fail or you will not succeed, but always work at your skill to recover. Part of that skill is knowing who can help. (10/18/13)

A few definitions of *Skill* I came across...

- ❖ the ability to do something that comes from training, experience, or practice
- ❖ the ability to use one's knowledge effectively and readily in execution or performance
- ❖ a learned power of doing something competently: a developed aptitude or ability

For us to innovate, sometimes we take risks and dare exposure to failure.

If the gamble doesn't pay out, the project can't afford sulking. In overcoming a setback, employ every acquired ounce of experience to get a project on track. This includes the wherewithal to recognize when your own skill may not answer the task, and knowledge of who has the means to help.

Skill is not an inborn faculty, but a mastery built through experience.

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**33.** Experience may be fine but testing is better. Knowing something will work never takes the place of proving that it will. (4/26/13)

Sometimes we take for granted those things we always do because, well... of course we did that, we always do that.

Testing: a surefire way to judge whether expectations meet reality.

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**34.** People have reasons for doing things the way they do them. Most people want to do a good job, and if they don't, the problem is they probably don't know how or exactly what is expected. (5/10/13)

First, people don't do things a certain way just to irk you. (You're not that important.)  
Second, the fact that someone completed a task differently than you might have done does not make it wrong.

If you would approach something a particular way for a specific reason -- validation sessions must have all departments represented, "*th*" should not come after "May 10" in the PR, Daniel-san must paint the fence Up-Down -- communication is key. Set clear and -- where necessary -- precise expectations toward which people can work.

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**35.** The boss may not know how to do the work, but he has to know what he wants. The boss had better find out what he expects and wants if he doesn't know. A blind leader tends to go in circles. (8/9/13)

Mission -- what you do.  
Vision -- where you want to go.  
Goals -- how you will get from your Mission to your Vision.

The "boss" here might not always be you... indeed, we'd better know how to do the work (and well). But, the project itself needs a Vision. With the quality of software we offer and the skills and expertise you hold, you're responsible to help shape the Vision and make sure your customer is aiming high enough. (Sure, Adam... if you put the bar on the ground, then even tripping over it gets you over it. But, Dick Fosbury achieved fame and Gold by setting a new standard, literally achieving new heights; not stumbling into mediocrity.)

Keeping an eye on the big picture means being in service of the vision: setting and shepherding the goal, each decision and incremental step, toward that end-state vision.

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**36.** A puzzle is hard to discern from just one piece, so don't be surprised if team members deprived of information reach the wrong conclusion. (7/5/13)

There are several situations we could tie this to, but let's start with this... Who's looking out for the big picture if not you?

You might not keep anything from your analysts, but their self-deprivation counts. Are they hard at work in system definitions or wide-reaching workflows, but have yet to rope in other applications and experts? Time is not going down the drain, it could still be spinning in the disposal.  
An integrated software suite designed for a billion dollar healthcare organization, and Leroy Jenkins is trying to solo this one?

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**37.** Reviews are for the reviewed and not the reviewer. The review is a failure if the reviewed learn nothing from it.

(12/6/13)

When I write an email, I often reread it before sending to check for errors or mistakes. Unfortunately, I also often find that things look good in that quick read-through, so... click! Sent! With a reply, I might review my initial email to refresh myself; and that's when I find mistakes, which by then are frustrating and embarrassingly laughable.

When you're heavily engaged in a task – whether writing, building, managing to the project plan, etc. – sometimes you see what you expect to see because you know what should be or you've rationalized it that way. Reviews by someone external are a sanity check for quality's sake and not a critique of you personally, so don't bristle at the feedback. The process is for us to identify things which might be really embarrassing on down the line if not caught.

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**40.** Not using modern techniques like computer systems is a great mistake, but forgetting the computer simulates thinking is still greater.

(12/13/13)

Office, OneNote, Project, SharePoint, Sherlock, WebEx, Wikis, Betelgeuse: tools available today provide an impressive array of features and functionality.

Tools can point out that the current pace of Clinical Content Validation is two weeks behind schedule. But, these tools probably won't tell you that our SMEs are on vacation over the holidays, so right now that two weeks is realistically four.

Had a contentious 51/49 split on a workflow? It says so the spreadsheet, but what should I do about it? Does it merit extra effort during training and optimization to get things just right?

Until Skynet, tools only help us carry out a particular function... application of critical thinking is your specialty.

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**41.** Management principles are still the same. It is just the tools that have changed. You still should find the right people to do the work and get out of the way so they can do it.

(7/26/13)

If you work for Kyocera there are 12, Toyota 14. Heck, there's even a CliffsNotes version on management principles...

And, yes; tools do change, but sometimes it's the same tools applied in a new way like RCR moving to ARCR (or that time you used a screw and pliers to get into that bottle of wine).

Sometimes it doesn't particularly matter who does the work so long as it gets done. But, sometimes... perhaps you need it done quickly, correctly, cleanly, and quietly. In these times, employ the skills of the right individual. You're not going to call a landscaper over heartburn, don't hand decisions to IT which need to come from Operations. If an ED order needs to be changed, go to the experts on Orders; if you want to figure out lab billing, talk to the billing experts.

Once you've the right person, don't try to micromanage – you've already sought them out for a reason. Let them work their magic.

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**42.** It is mainly the incompetent that don't like to show off their work.

(9/27/13)

I know what you're thinking, but you read it wrong.

We're not talking about the modest vs. the show off (indeed, you could argue an inverse relationship with competency there). No, instead you need to think back to 5th grade math... Did you get credit for

$(a + 1)^2 = a^2 + 2a + 1$  without showing any work?

Be wary of those who cannot or will not show their work, whether to explain rationale behind a decision, defend an opinion, or simple calculation of weeks remaining to go-live. You don't need to challenge everyone and everything, but you do need to understand what input you can take at face value and what must first be verified. Even the modest take pride in their work and will walk you through how they arrived at a particular destination, but someone who won't do that is either hiding the fact that they don't know, lying, cheating, or closed to criticism -- either lacking in competency to complete the work themselves or lacking competency as a team player.

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**43.** Whoever you deal with, deal fairly. Space is not a big playing field. You may be surprised how often you have to work with the same people. Better they respect you than carry a grudge.

(3/21/14)

There is a lot of migration in the healthcare sphere – executives, physicians, nurses, analysts – all areas and levels of healthcare professionals can move from one organization to another. Consultants can move from one firm to another. People working at a healthcare organization or vendor can move into consulting.

In your day-to-day interactions; what you say now, what you do now, how you represent yourself now will be remembered.

It might come back on you in four years' time when the *then* project director at your old customer is the *now* CIO at your new customer, and they can't stand you. It comes back on Epic, and could put all of us at a disadvantage when trying to start a relationship with someone who's already watched you burn that bridge.

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**45.** You cannot be ignorant of the language of the area you manage or with that of areas with which you interface. Education is a must for the modern manager. There are simple courses available to learn computerese, communicationese, and all the rest of the modern ese's of the world. You can't manage if you don't understand what is being said or written.

(2/22/13)

*Originally sent without comment*

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**46.** Most international meetings are held in English. This is a foreign language to most participants such as Americans, Germans, Italians, etc. It is important to have adequate discussions so that there are no misinterpretations of what is said. (7/19/13)

An interesting point to bring up with the introduction of EpicCorps. What does it mean when you put a discussion *on the table* in the US vs. the UK?  
As for gestures? No. Just... no.

English is a complex language with striking departures from convention hidden in a minefield of subtle nuance. Even among native English speakers you can find different interpretations of the same conversations, but in the end the goal of all communication is comprehension. If you have bad news, don't dance around trying to NERF it. If that workflow didn't sound right, don't build it to what you thought you heard.

Be clear and be certain, or bring it up again.

And, if you haven't already been tearing apart my blue text here, maybe you should start. Otherwise, how would you know what you might improve in your own communications?

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**48.** A working meeting has about six people attending. Meetings larger than this are for information transfer. (9/13/13)

Want to generate new ideas by employing lateral thinking, or gain fresh insight on the problem by evaluating a different perspective? Hoping to sit down and push through a round of fixes? Trying to figure out what to order for lunch?

If you intend to accomplish something more than swirl, you need a small team with clearly defined roles and responsibilities that can work together and execute.

Too many in the room and either everyone wants to get their word in (swirl), or you'll encounter [Diffusion of Responsibility](#) (nothing).

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**53.** Cooperative efforts require good communications and early warning systems. A project manager should try to keep his partners aware of what is going on and should be the one who tells them first of any rumor or actual changes in plan. The partners should be consulted before things are put in final form, even if they only have a small piece of the action. A project manager who blindsides his partners will be treated in kind and will be considered a person of no integrity. (3/1/13)

*Originally sent without comment*

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**54.** All problems are solvable in time, so make sure you have enough schedule contingency -- if you don't, the next project manager that takes your place will.

(11/22/13)

One round of integrated testing is not enough. You know this and can use experience to guide customers toward a big-picture perspective where the project can absorb variance from the plan.

But also think about this at a lower level...

It's noon Thursday and you're leaving for the airport. Your customer fires one last question at you before you reach the door: can you put a document together that will explain the details of what everyone just discussed?

*Yes, I can do that. I'll send it out tonight.*

What happens if travel woes find you driving home from Chicago at midnight? You get home, it's 3am, and you just want to go to bed.

Nope, now you either draft a document of dubious 3am quality or break a promise.

The former is terrible for your mental health and workplace happiness; the latter is to the detriment of your dependability and reduces your overall effectiveness in the role.

What will occur if either happens too frequently?

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**57.** Abbreviations are getting to be a pain. Each project now has a few thousand. This calls on senior management to know a couple hundred thousand. Use them sparingly in presentations unless your objective is to confuse.

(3/29/13)

If escalating the CFB backlog of DNB HARs caused by bad CVGs during Reg in the PR after review of your KPIs during the first PLV, a problem you tried to call attention to during the GLRA, don't expect the CIO to know what you're talking about.

She's not an idiot; you're not being clear. Simplicity does not insult intelligence.

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**58.** Occasionally things go right--the lesson learned here is: Try to duplicate that which works.

(5/3/13)  
& (5/9/14)

When something goes wrong, we look for root causes and we fix the problems. However, when was the last time you sat down and applied the same critical eye to something that went well? Analyze not just the failures but also the successes, then build upon strengths.

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**59.** Running does not take the place of thinking. For yourself, you must take time to smell the roses. For your work, you must take time to understand the consequences of your actions. (11/29/13)

This lesson is poignantly apropos today.

For me, I took a leisurely approach to my Friday routine this morning... an opportunity afforded by the Thanksgiving holiday and lack of critical deadlines. Among our cadre, we benefit by allowing our driven personalities to take the front seat; but there are risks to constantly running at 100%. As with any risk management plan, [exploit positive risk](#) where appropriate and possible - - like realizing an opportunity to slow down (even if just for a morning).

For my work, I'm using the opportunity to look backwards. Is there a decision somewhere past that I regret? What can I learn from that?

If you're not familiar with the [story of Enos](#), I encourage you to read the linked, short account of his space flight. It's quite heartbreaking. (Note - this date was the 50th anniversary of Enos' space flight)

The lessons I elaborate upon each week were originally compiled at NASA.

The programs and projects at NASA are run by individuals who, like us, try to deliver their absolute best every project. Given the drive pushing each of us to deliver now, sometimes consequences for the future become afterthoughts. Sure the workflow fits now, but is it sustainable?

If you are truly driven, realize that not evaluating consequences might handicap your success. At the very least, you'll never be as good as Magnus Carlsen.

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**60.** Sometimes the best thing to do is nothing. It is also occasionally the best help you can give. Just listening is all that is needed on many occasions. You may be the boss but, if you constantly have to solve someone's problems, you are working for him. (1/24/14)

Sometimes verbalizing a problem organizes swirling thoughts.

Sometimes people just need to get concerns off their chest.

It's important that the team feels safe coming to you with problems, and that you take pause to consider what help is sought.

I'd imagine Michael Jordan mentioned it when he faced a tough guard, but I don't imagine that Phil told him when, how, and where to dribble to address such a problem.

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**63.** Remember, it is often easier to do foolish paperwork than to fight the need for it. Fight only if it is a global issue which will save much future work. (10/4/13)

You need energy and confidence to make a stand when it really counts.

Conflict takes energy, increases your cognitive load, and can cost you influence. If you're fighting over the little things that don't matter, that's squabbling.

Squabbling can leave you ill prepared for important battles. Fight when it matters, back off when it doesn't.

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**64. Know your management -- some like a good joke; others only like a joke if they tell it.** (9/6/13)

Yes, this partly speaks to our typical customer relationships extending beyond a mere vendor-customer nature, but the takeaway here is that you should have a solid set of interpersonal skills in your toolbox.

All people should not be treated the same (being neither Communist nor Borg), particularly if your manner of treatment is high-handed, abrasive and boorish. Rather, you hold the responsibility of interacting with people on your project in the manner which they prefer (and the manner which will ultimately get you the best results).

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**65. Integrity means your subordinates trust you.** (5/31/13)

The stance you take with executives should not contradict one you take when talking with your team.

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**66. You cannot watch everything. What you can watch is the people. They have to know you will not accept a poor job.** (6/21/13)

If you're trying to be at the center of everything, you're not delegating or managing effectively. Clear expectations and goals for quality should be broadly understood.

From there, if you cannot read your project team well enough to understand when they're taking on too much vs. too little, struggling vs. succeeding, upset vs. excited, hiding details vs. overlooking details... you've not done your job at building those relationships.

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**67. Next year is always the year with adequate funding and schedule -- next year arrives on the 50th year of your career.** (6/21/13)

You will always have a shortage of something on a project: time, people, skills, decisions, accountability, budget, morale, patience... something.

Unless you manage projects for the Ministry of Magic, you'll need to balance requirements and constraints.

For those short on magic, get over it. Nothing is accomplished by dwelling on what you don't have, and sometimes plans made to ensure you have everything you need simply change.

Stay adaptable, evaluate options, set your course, push forward, and encourage optimism (while staying realistic). Someday you'll have a project where it all just falls into place, and that's the day you'll be bored.

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**68. The first sign of trouble comes from the schedule or the cost curve. Engineers are the last to know they are in trouble. Engineers are born optimists.** (7/18/14)

Whether you, your PM, or your analysts; sometimes pride and self-confidence (or fear of admitting to being behind) can carry you into a tight spot.

If Sonar and your Week-by-Week look like a traffic accident, believe your eyes and trust the data.

We track budget and task-completion information to gauge progress, so it doesn't make a lot of sense to ignore solid evidence. Actual vs. Expected is a multi-purpose tool for project managers, and it provides a solid, rational footing to address unrealistic optimism, even when it's your own.

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**70.** Hide nothing from the reviewers. Their reputation and yours is on the line. Expose all the warts and pimples. Don't offer excuses -- just state facts. (6/14/13)

One of the topics during the IS Division meeting this month: Independent Application Reviews. IAR reviewers try to check the right build topics, ask necessary questions, test potential failure points...

But, the reviewed need to embrace this process for it to work.

Are you minimizing something that is, privately, an area of concern to you – maybe your customer still hasn't defined and built workqueues? If you're embarrassed about that incomplete build, just wait until the TLs have to schedule a War Room because your WQs have 10K+ unworked entries each. And, billing becomes... well...

All because you were reluctant to escalate in an *internal* review.

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**72.** Knowledge is often confounded by test. Computer models have hidden flaws, not the least of which is poor input data. (8/1/14)

We've constructed a wealth of tools at Epic to make installs easier: Project Plans, Scoping Documents, Validation Sessions List, Training Wheels, GLRA Templates, the Foundation System...

These tools are organizational process assets representing the accumulated knowledge and experience gained across all prior implementations... but only to a point. In fact, they are only an accumulation of contributed knowledge and experience.

If you run across a deficiency or issue with a shared tool, it's okay to privately roll your eyes in frustration. If you're wondering "*why hasn't someone fixed this,*" it's because you haven't done it.

All share responsibility to help curate the library of collective wisdom. If you do nothing, you're a weight dragging at the ship everyone else is working to sail.

Plus, you'll just wind up rolling your eyes again on the next install, and your Mom said that if you keep making that face, it'll get stuck like that.

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**73.** Today one must push the state of the art: be within budget, take risks, not fail, and be on time. Strangely, all these are consistent as long as the ground rules, such as funding profile and schedule, are established up front and maintained. (9/20/13)

Sometimes getting it right is more art than science.

Each new project introduces new challenges to overcome, and each new customer comes with a unique blend of environmental factors – including priorities. If you aren't aware of Triple Constraint, [look it up](#)...

Some customers are most concerned with hitting a go-live date, others put primacy in releasing a full feature set, and many need us to hit that budgetary target. All have some mix of the three in mind as the ideal balance.

Be clear and up front about cost, scope, and schedule when starting the project: these become promises.

Carefully communicate what impact decisions made during execution will have on these priorities: manage your customer, keep your promises.

86% of installs under budget, eh, Epic? Nice!

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**75.** A scientific proposal takes about 9 months to put together. It takes NASA HQ about 9 months to a year to select the winning proposals. Then, it takes 3 to 4 years to sell the program. This means 5 to 6 years after the initial thoughts, the real work starts. Managers, for some strange reason, do not understand why a scientist wants to build something different than proposed. Managers are strange people. (7/4/14)

In the big picture, an organization's journey to Epic can take a similar path. Specific to us, it's often difficult to remember that between kickoff and go-live there is usually 12-18 months.

There are always conditions outside of the project team's control affecting project work, so when building any plan, account for the environmental factors in play – things like culture, risk tolerance, industry standards, and political climate – because they can drive directional change. In some cases, stakeholder desires might change to provide a better patient experience, meet new regulatory requirements, or address a new pain point.

Sometimes people change their minds over the course of 1.5 years for reasons greater than mere whimsy... Knowing the environment producing a change helps you better understand how to update your planning.

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**76.** There are rare times when only one man can do the job. These are in technical areas that are more art and skill than normal. Cherish these people and employ their services when necessary as soon as possible. Getting the work done by someone else takes two to three times longer, and the product is normally below standard. (11/15/13)

You've likely heard someone throw around the platitude "valuable expertise" by way of a half-hearted, appreciative head nod to acknowledge the application of experience to a problem or conversation. *We appreciate Sharon joining us today to lend her valuable expertise to the agenda topics.*

But, you should recognize when someone has it, and understand the literal meaning of it. If you conference in an expert when a customer has a problem (remember that 5-star response?), or handoff a build task to someone especially well-suited to execute, you are literally saving time by getting it right as fast as can be possible, and what's more – you're getting it right the first time.

With our personalities, many times we want (or want to believe) the expert to be ourselves. Your pride can kill a project.  
Save time, save budget, save the headache.

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**81.** There is no greater motivation than giving a good person his piece of the puzzle to control, but a pat on the back or an award helps. (6/28/13)

Epic IS are self-motivated go-getters, with at least a little bit of Type A in their pedigree, who strive each day to surpass expectations.

If you give a person like that something to tackle, especially when right up their alley (not just in-system, but also things like building relationships, motivating others, organizing logistics...), it's like watching a little bit of magic.

You shouldn't abuse that talent though blind expectation, however... Good work must be recognized, even when it was the goal. No one stopped giving Michael Phelps an 'atta boy after winning each gold medal just because they expected him to win. What would happen if people stopped recognizing your contributions?

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**82.** Morale of the contractor's personnel is important to a government manager. Just as you don't want to buy a car built by disgruntled employees, you don't want to buy flight hardware built by them. You should take an active role in motivating all personnel on the project. (3/22/13)

Besides being mildly humorous, this could apply to every project. If you're on a rough install - one which Peter Griffin might find to grind his gears - and you're wondering who is in charge of team fun and morale... Here's a mirror-facing revelation to rock your hippy world: it's you. Share the love.

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**83.** People who monitor work and don't help get it done never seem to know exactly what is going on. (5/17/13)

AM #1: A project manager cannot be above performing day-to-day work.  
AM #2: lol, wat?

Help get things done in the capacity that you can, and for more reasons than just knowing status. Think team morale, encouragement, acumen, edification...

It doesn't have to be build: communicate, plan, escalate, document, test – be involved or your replacement will. (Though, you can label that build a schedule compression technique :) If you merely read a report you could be hoodwinked by a lie, exaggeration, or misunderstanding. Getting your hands dirty is the best way to know status, and you can't manage what you don't know.

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**84.** Never assume someone knows something or has done something unless you have asked them. Even the obvious is overlooked or ignored on occasion -- especially in a high-stress activity. (4/19/13)

There are multiple messages, but I think you get the picture. Actions, conversations, deliverables, decisions, tasks, information -- reality and your perception of it need not be congruent.

You know what they say about making an assumption... When you shoot your mouth off first and ask questions later, you might find you just took a bullet in the foot. You can become overcommitted and/or surprised by circumstances unless you first make sure you and everyone else in the situation has the facts straight.

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**85.** Don't assume you know why senior management has done something. If you feel you need to know, ask. You get some amazing answers that will dumbfound you. (8/8/14)

Intentional upward ribbing for a smile, but you might see more...  
When factors beyond your control change circumstances, it's not always favorable. And, it's important to know that people bond through shared experience, particularly struggles.

Sometimes that bonding is manifested through humor, but you need the emotional intelligence to distinguish sharing tough times from true negativity to know the morale of your team.  
And, while it's easy to share in the moment and crack a joke (if that's all it is), those outside of the bond don't understand what's taking place. That is to say, a flight home is the perfect time to shut up.

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**86.** If you have someone who doesn't look, ask, and analyze, ask them to transfer. (1/3/14)

An overwhelming majority of cases won't provide you the chance to suggest alternative opportunities for struggling individuals.

This means you are responsible for building counterparts' and coworkers' skillset inventories in the best way to solve problems... for short-term project work as well as the long-run.

- **Problem Solving Style:** train and cement the tendency to respond in an appropriate way
- **Problem Solving Steps:** teach the ordered process of problem solving (hint – it always starts with defining the problem)
- **Problem Solving Strategy:** push the need to be proactive – address issues before they're problems, tackle problems before they're failures

Style, Steps, Strategy.

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**89.** A good technician, quality inspector, and straw boss are more important in obtaining a good product than all the paper and reviews. (7/25/14)

It's the people performing the work who succeed, but it's rare if we have much say in who we work with on a project.

Following process doesn't mean we're guaranteed to hit the mark, but process helps us set targets and provides the means to measure distance from them.

If people are to make it happen in an environment where only coordinated efforts will answer, they need to understand the process we all follow to know what's expected of them achieving a united goal.

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**88.** A person's time is very important. You must be careful as a manager that you realize the value of other people's time, i.e., work you hand out and meetings should be necessary. You must, where possible, shield your staff from unnecessary work, i.e., some requests should be ignored or a refusal sent to the requester. (4/4/14)

The Project Manager should drive work...

It's on the combined effort of the project team that you will arrive on time at your planned destination.

Don't force an unnecessary detour if it will make you late. If you are off plan, recognize what corrections are necessary then understand when those actions require a suggestion vs. a firm hand.

Part of your job is to protect your team, just as you would protect yourself. Time taken from them is time lost getting to where you're supposed to be.

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**90.** The seeds of problems are laid down early. Initial planning is the most vital part of a project. Review of most failed projects or of project problems indicates that the disasters were well planned to happen from the start. (1/31/14)

Even simple tasks need a plan. For example, I've never been able to will a pot of coffee into existence (but that never stops me from trying).

There are requirements to produce coffee: materials, tools, time, knowledge. If you have no map of how to get from "no coffee" to "ready for conference calls," things could be disastrous for you and most others in your building.

Without a plan of sufficient detail, you have nothing against which to measure progress; and with no way to monitor a project you have no control - - you're no longer managing.

Even so, just having a plan doesn't necessarily mean it's any good. Tailor and refine that plan to meet the project's needs and objectives from a firm footing in reality.

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**91.** A comfortable project manager is one waiting for his next assignment or one on the verge of failure. Security is not normal to project management. (3/28/14)

Many in Implementation are self-driven, motivated to accomplish something without external reward. Of course reward never hurts, but it's more about personal pride. Most people like that I've come across have an innate grasp of something the recent GTD seminar put into explicit terms...

If you don't have a sense for where the thin line between *in control* and *out of control* actually is, then you're not close enough to it; you're not taking on enough or trying hard enough to be challenged. If you're not challenged, then you're not playing at the top of your game, nor are you growing; both of which open the door to failure.

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**92.** Remember, the President, Congress, OMB, NASA HQ, senior center management, and your customers all have jobs to do. All you have to do is keep them all happy. (6/6/14)

Three things hit me when reading this...

1. With non-project team stakeholders, your project (your focus) is just one of many things they have going on. This is good and bad, but have realistic expectations of their time for you.
  2. What does it take to make stakeholders happy?  
On time, quality deliverables that - at a minimum - meet expectations? Sure, easy guess.  
But if there's an issue, recognize who you consult to achieve resolution and who you inform of the problem, the considerations weighed, and that final resolution. Do all know the responsible team members and the accountable decision-maker? No one wants to be circumvented or out-of-the-loop, so communicate appropriately - - know the who, what, when, how, and how often of your communications.
  3. The President, huh? Whelp, guess that's checkmate... No matter how tough you think your struggles are, someone else always has it worse.
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**93.** Always try to negotiate your internal support at the lowest level. What you want is the support of the person doing the work, and the closer you can get to him in negotiations the better. (7/11/14)

If Kathy is the analyst who can fix a pressing issue, I shouldn't need to call the Project Director and have her notify the Ambulatory PM who in turn passes the request to Kathy.

I should have a relationship with Kathy where I can pick up the phone, tell her what I'm seeing, and ask what we can do together to get this fixed.

That doesn't mean I leave others out of the loop or circumvent process, but I cannot be above direct involvement in solving the problem.

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**94.** Whoever said beggars can't be choosers doesn't understand project management. (10/25/13)  
Many times it is better to trust to luck than to get known poor support.

You must be able to rely on your team.

Don't remain silent about taking proven testing failures into go-live, and be similarly wary of moving forward with people you cannot trust.

It's possible to work around individual weaknesses and deficiencies, that's just part of the job. But if the only thing you can count on is that someone cannot be counted upon, then take action before taking the risk of baking a known failure into the plan.

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**96.** There is only one solution to a weak project manager in industry -- get rid of him fast. (7/12/13)  
The main job of a project manager in industry is to keep the customer happy. Make sure the one working with you knows that "on schedule, on cost, and a good product" -- not flattery -- is all that makes you happy.

From the perspective of a customer, but important point for us to remember; last time I saw the reports, KLAS wasn't ranking how well vendors maintain small talk relationships.

It's a credit to you as a person and helps to distinguish Epic culture when establishing relationships to that depth - friends, not vendors - but if your install was delivered late, over budget, and resulted in more issues than benefits post-live... knowing the names of your project director's children won't count for much.

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**97.** Talk is not cheap. The best way to understand a personnel or technical problem is to talk to the right people. Lack of talk at the right levels is deadly. (8/16/13)

Ever play a game of telephone? Do you remember how that last person never had the right message?

As you receive a communication, you are the last person.

If you don't have the full details or completely understand an issue, question, or risk, and you haven't engaged the person closest to it on the ground, you've only prepared to propagate miscommunication.

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**98.** Projects require teamwork to succeed. Remember most teams have a coach and not a boss, but the coach still has to call some of the plays. (3/15/13)

*Originally sent without comment*

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**99.** In the rush to get things done, it is always important to remember who you work for. (6/13/14)  
Blindsiding the boss will not be to your benefit in the long run.

A few years ago, I was in Borealis when the network went down.  
Implementers were wandering the halls like it was some zombieapocalypse, and it was hilarious to see.  
No one knew what to do because right then we didn't a good way to keep busy. We're used to being busy...  
Sometimes we admit to being too busy.

Take a Google break and investigate how much time a project manager spends communicating... Significant?  
It's a core competency, and if I'm too busy for something like that then I'm really just lousy at my job.  
Communication isn't an afterthought when time permits, your customer shouldn't be unaware of action taken to get things done.

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**100.** Over-engineering is common. Engineers like puzzles and mazes -- try to make them (4/18/14)  
keep their designs simple.

Sometimes people mistake complexity as the hallmark of an elegant solution to a sophisticated problem.  
You should know the difference between complex build and a complex workflow...  
To account for 3 possible scenarios, we sometimes create 3 derivations to the same workflow.  
If A, then X  
If B, then Y  
If C, then Z

...then we wonder why people want tip sheets.  
Users want simplicity. If complexity is pushed by a system limitation, write a QAN.  
Users might be willing to put in an extra click, fill out an extra field if it reduces cognitive load and allows them to follow the same path every time.  
Don't require a decision tree to let people do their jobs.  
If A, then X  
If B, then X  
If C, then X

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**101.** Never make a decision from a cartoon. Look at the actual hardware or what real (12/27/13)  
information is available, such as layouts. Too much time is wasted by people trying to  
cure a cartoon whose function is to explain the principle.

To me, this one is about the need to have eyes on a problem.  
Things can and do get lost in translation as one tries to explain an issue to another. If it takes more than a few sentences to explain or more than a few clarifying questions to understand, you should figure out a way to see what they see to make sure you're solving the correct problem.

Partly, we value site visits because they're an opportunity to actually see, understand, and better focus our attention on the right things.

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**104.** The pioneering phase of NASA is mostly done, if not actually by fiat. This means the difficult and more important work has started. This work requires more discipline, but there should still be room for innovation. (6/27/14)

The success and goodwill accumulated across Epic's entire history is only a kindly penned forward to your project.

Each completed project adds to the expectation placed upon your project, and the challenge now is living up to these expectations while not being so conservative that we lose ground in discovering ways to do things better, faster, and cheaper. The sense now is that in order to live up to our reputation and survive, we must push beyond the boundaries and baggage of even a good reputation and thrive.

In keeping your nose to the grindstone, no one ever said you couldn't reinvent the grindstone...

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**87.** B\*\*\*\*\*ds, gentlemen, and ladies can be project managers. Lost souls, procrastinators, and wishy-washers cannot. (2/14/14)

**109.** Gentlemen and ladies can get things done just as well as b\*\*\*\*\*ds. What is needed is a strong will and respect -- not "strong arm" tactics. It must be admitted that the latter does work but leaves a residue that has to be cleaned up.

When a large emphasis of the Project Manager's role is on delivering results, delay and indecision -- irrespective of cause -- is worthless.

Sometimes in the push to get it done, to deliver, I wind up a bit short or sharp; particularly in email. Yep, I'm guilty, I know it, but that doesn't excuse it.

Instead, it means there are people who must work with me that would rather not. I could pretend it's not my problem, but it is...

The latest from PMI:

Project Management is 90% communication

[56% of budgetary risk among all projects is due to ineffective communications](#)

Consider the part relationships play in communication.

Would you care to listen to or read my opinion if I'm a jerk?

Do you want to get in touch with me, even for an escalation, if I'm a jerk?

Don't be a jerk.

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**106.** In political decisions, do not look for logic -- look for politics. (3/7/14)

We deal with the big players in healthcare, and when these groups join Epic it requires a monumental amount of support spanning the breadth of their organization.

Go-live dates, scope decisions, staffing, workflow, budgeting... Sometimes, to secure support it requires negotiation, promises, and political capital. Sometimes small segments of the enterprise throw around weight they don't have, seemingly holding others hostage.

Everyone desires some modest level of control over what will affect them. IOUs will be called, weight will be thrown.

In these situations, it's important to recognize the factors influencing the decision... at these times you just need to put your head down and get the job done.

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**110.** Though most of us in our youth have heard the poem that states "for want of a nail the race was lost," few of us realize that most space failures have a similar origin. It is the commonplace items that tend to be overlooked and thus do us in. The tough and difficult tasks are normally done well. The simple and easy tasks seem to be the ones done sloppily. (5/23/14)

Guilty.

A few pointed out that last week's impeachment fact was relevant to Andrew Johnson and not Andrew Jackson. That's what I get for transcribing information without paying close attention to detail, and it illustrates this lesson well. When performing something routine or seemingly easy; we don't always commit our full critical faculties to the task.

Small problems can add up to have a large net effect, like building all of your templates in the wrong departments; but small problems can also trigger a butterfly effect, like publishing and committing to the wrong go-live date (which will drive training schedules, testing timelines, build timelines, vacation approval, etc.).

Project Quality Management.

We put an emphasis on checks and reviews to catch the small mistakes – everything from PR reviews to IARs to GLRAs. You can spend a little effort now to ensure high quality up front, or you can spend a lot of effort later to correct the results of poor quality.

For want of a nail the shoe was lost.

For want of a shoe the horse was lost.

For want of a horse the rider was lost.

For want of a rider the message was lost.

For want of a message the battle was lost.

For want of a battle the kingdom was lost.

And all for the want of a horseshoe nail.

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**112.** Meetings, meetings -- A Projects Manager's staff meeting should last 5 minutes minimum -- 1 hour max -- less than 5 minutes and you probably didn't need the meeting -- longer than 1 hour, it becomes a bull session. (1/10/14)

Team meetings help accomplish many things... sharing, planning, refining, identifying, shaping, bonding.

A lot of good can come from meeting, but be mindful of the meeting's purpose and hold to it with the goal to respect everyone's time. Without careful management, long meetings lead to greater digression from the agenda.

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**115.** Reviews, meetings, and reality have little in common. (3/14/14)

Some do not expose critical details during meetings and reviews because not everyone plays by the golden rule. It stinks, but it's important to recognize so that you have a realistic grasp of your project.

But, even in a high-functioning team, it's important to remember that reviews and meetings don't necessarily reflect reality.

In reviews, we spend time on big problems: that's where we need the most attention.

In meetings, we communicate issues and day-to-day troubles.

However, it's important to keep in mind the reality that not everything is on fire. There is also good work being done, so keep an eye on the positive. Your sanity and the team's morale will both last longer.

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**116.** You should always check to see how long a change or action takes to get to the implementor - this time should be measured in hours and not days. (11/1/13)

Plans made within the project shouldn't exist solely to make it to go-live, tag in TS, and check out after PLV3. From a customer's perspective, this project is a step toward achieving a strategic vision, and our plans must therefore reflect the need to sustain all realized benefits in the long term - that's how we help make Epic lifetime software.

Help establish feedback pathways between operations and IT, work to build the governance structure to support future change, and foster an attitude of good will and mutual support between the builders and the users... You can't make a horse drink, sure, but you are responsible for leading it to the water.

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**117.** Let your staff argue you into doing something even if you intended to do it anyway. (2/7/14)  
It gives them the feeling that they won one! There are a lot of advantages to gamesmanship as long as no one detects the game.

*Oh, you had a good idea? Too bad I already thought of that...*

This lesson doesn't praise the manipulation of others through their legitimate concerns and interests, but illuminates the needlessness of insisting upon being the smartest person in the room. Others don't appreciate it, it can stifle future creativity and ruin the team dynamic, and worse they may not raise such points in the future where you may have missed something.

Where there is no battle, there is no value in winning; so be gracious and let others know when they're right – even if you arrived there first.

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**125.** Too many project managers think a spoken agreement carries the same weight as one put in writing. It doesn't. People vanish and change positions. Important decisions must be documented. (4/5/13)

It's atypical in our Epic culture to leave a paper trail across the many small discussions that pave the road to go-live. Words carry weight, and any verbal commitment made carries all the gravity of a promise in writing. And though you might remember that conversation with your PM on when they'll deliver that finalized list of Super Users, they might not.

If you and the customer agree to details, deliverables, dates, tasks yet to happen; important enough for you to or your customer to bring up in conversation... it's important enough to write down.

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**127.** Too many people at Headquarters believe the myth that you can reduce the food to the horse every day till you get a horse that requires no food. They try to do the same with projects, which eventually end up as dead as the horse. (5/2/14)

Cannibalism isn't often a concern on our projects: the Epic implementation is the organizational priority pulling people, time, and money from elsewhere.

But, the point that subtle change can overwhelm is significant.

An analyst leaves, a few new forms become necessary, an additional department is included... Not every major concern comes as a hairpin turn just before go-live, and a few degrees here and there over many miles will take you just as far from your planned destination. Evaluate how a change will affect the current situation, but keep in mind the sum of all changes from the original plan – it's difficult to deliver on expectations when you're chasing a moving target.

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