

Project Management

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- Zahájenie projektu
- Príprava kontraktu
- Manažment všetkých aspektov projektu:
Manažérsky cyklus: planovanie, organizácia, vykonávanie,
monitorovanie, vyhodnotenie
- Rozhodovanie
- Information management

- definovanie plánovaných položiek
- estimácia (náročnosť, predpoklady, ...)
- alokovanie zdrojov
- scheduling
- update plánu

Treba plánovať rôzne

- rozsahy
project plan, release cycle plan, iteration plan
- aktivity
všetky v rámci SE; vyberám (lebo toto sme zatiaľ nemali)
Contract management; Risk Management ; Change management; Quality management, Testing ...

Zorganizovať

- Project team structure
- Definovať procesy
- Prostredie
- Zabezpečiť zdroje
- Priradiť zdroje abstraktným úlohám

Regulovať a riadiť

- procesy
- zdroje

- Meranie
- Uchovavat logy z merania (napr. testing scores, fixing scores)
- Výsledky použiť pre
d'alšie plánovanie, zlepšovanie procesov, ohodnotenie, ...

Spriaznené disciplíny:

- Interpersonal communication, conflict management and resolution (wiki)
- Contract Management
- Risk Management
- Change Management
- Requirements management
- ...

Wiki

Správne estimácie sú potrebné pre:

- planovanie (čas, zdroje)
- rozhodovanie
- monitorovanie
- evaluáciu (estimácia vs. skutočnosť, napr. kontrakt)

Tlak od: Management, customers, executives (MCE)

- risk management - transfer risk to somebody else
- zabúda sa, že je to estimácia

Každopádne estimácie potrebujeme.

Estimácie potrebujeme ,ale nevieme ich robiť

- Hofstadter's Law:

It always takes longer than you expect, even when you take into account Hofstadter's Law.

- 90-90 Rule:

The first 90 percent of the code accounts for the first 90 percent of the development time. The remaining 10 percent of the code accounts for the other 90 percent of the development time.

- Lepši názov: (educated) guess [1]:

I can see how I'd do it if I were rewriting that whole controller from scratch, but that would take days ... is there an elegant hack where I can change the inputs to this function in such a way that I don't have to rewrite its code? ... what if I monkeypatch it at the class level? ... wait, maybe there's an API call that almost does what I want, then I can tweak the results - hang on, what if I outsource it via an asynchronous call to the external OS? In that case I can confidently estimate that this will require less than two hours of typing. However, working out what to type is going to take me/us anywhere from one hour to several days. Sorry.

- MCE budú často trvať na estimáciach

Estimácie - ani toto nie je dobré

Software estimates are always wrong, because the tasks being estimated are always, to some extent, terra incognita, new and unknown. However, sometimes the errors are in your favor; an obscure API, a third-party library, or an elegant hack condenses what you expected to be a week's worth of work into a single day or less. [1]

- toto je tiež problém - nevyužitie zdroje

- positive bias
- MCE pressure
- might be hard to get intellectually honest estimates:

The sad ultimate truth is that it takes as long as it takes, and sometimes the only way to find out how long that is to actually do it. MCEs hate this, because they value predictability over almost all else; thus, they nearly always, on some level, treat estimates as commitments. This is the most disastrous mistake yet because it incentivizes developers to lie to them, in the form of padding their estimates - which in turn inevitably slows down progress far more than a few erroneous task estimates might.

- rozbiť na menšie časti - má to problémy [1]

Second, some MCEs tend to think that they can increase the accuracy of estimation by adding precision and granularity - by breaking down large projects into as many small tasks as possible, maybe even hundreds of them, and asking for individual estimates of each small task. This is a catastrophically terrible idea. Increasing precision does not increase estimate accuracy. In fact it does the exact opposite.

- veľa práce Functionality also not the right key. Consider a concrete example. Suppose you're building an app that logs in to a web service. Don't have individual server-side estimates for "user can create account," "account email address can be confirmed," "user can log in," "user can sign out," and "user can reset password." Have a single "user authentication" task, and estimate that. [1]
- vyhráva optimizmus, MCE pressure
- estimation fatigue

- Project is not measurable in man.hours
- Brooks' law:
Adding engineers to a late software product makes it later.
- iné miery (eg. user story points, function points)
- CME pressure for man-hours

- Deadly sins (zdroj)
- How to respond (zdroj)
- Types of estimation (zdroj)

- Planning poker
- COCOMO
- Weighted Micro Function Points
- Proxy-based estimating

"Let's run that trail. It'll take 30 minutes." [2]

- Čo to je (zdroj)
- Štatistika môže zvládať skonvertovať story points na mandaye.

- XS, S, M, L, XL
- počas behu projektu sa spresňuje význam
- T-shirt estimates - warning signs
- XL -> more granularity
- SSSSS -> granularity trap
- If you have a roughly even mix of S, M, and L, you've probably structured things so that you'll have pretty good - well, least bad - estimates. [1]

Oponovať požiadavkám MCE?

- Cone of uncertainty (material)
- Problémy estimácií (zdroj)

- Critical path method (wiki)
- Gantt chart (wiki)
- Putnam model

- Brook's Law (wiki):

Adding manpower to a late software project makes it later

What can work?

- change schedule
- good programmers/experts
- help in related tasks (quality assurance)
- add manpower early

Veľa možností príklad (zdroj)

Issue tracking

Merania (definovať, naplánovať, vykonať):

- for contract
- improving product
- improve efficiency

Priklady:

- artefact quality
- project progress
- team effectiveness
- evaluating estimates

<http://www.dcs.fmph.uniba.sk/~cervenka/oose/OOSEProjectManagement.PDF>

https://en.wikipedia.org/wiki/Software_project_management

https://en.wikipedia.org/wiki/Anti-pattern#Project_management

https://en.wikipedia.org/wiki/Hofstadter's_law

https://en.wikipedia.org/wiki/Ninety-ninety_rule

[1] <http://techcrunch.com/2016/04/30/estimate-thrice-develop-once/>

http://www.ewh.ieee.org/r5/central_texas/austin_cs/presentations/2004.08.26.pdf

<http://programmers.stackexchange.com/questions/648/how-to-respond-when-you-are-asked-for-an-estimate>

https://en.wikipedia.org/wiki/Software_development_effort_estimation

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<https://agilefaq.wordpress.com/2007/11/13/what-is-a-story-point/>

[2] <https://www.mountaingoatsoftware.com/blog/the-main-benefit-of-story-points>

<https://rclayton.silvrback.com/software-estimation-is-a-losing-game>