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Estimations - those possible and impossible

Engineering Managers Warsaw



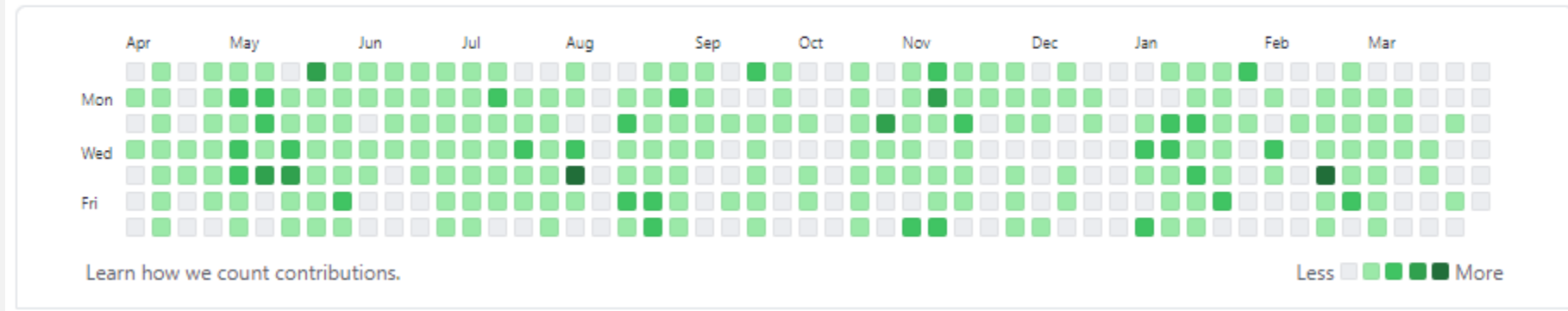
My Background with estimations



- » Currently team leader of 11 people team consists of backend, frontend, testers and PO, working on internal EcoVadis product
- » Previously working on couple projects in banks as a developer and leader
- » Passionate developer writing code as a daily hobby and sharing tools with community



1,406 contributions in the last year



Agenda

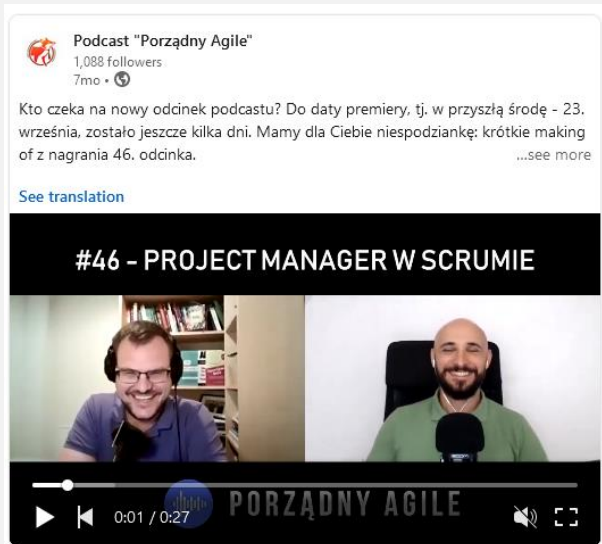
- » Importance of estimations
- » Story points
- » Hours/MD estimations
- » Estimating big projects with estimator

Importance of estimations

- » Senior developer needs to know how much his work cost
- » Business needs to know how much code costs
 - » Business usually don't know what means cheap and expensive
 - » Usually, business care more about the date which we committed than to the time which we need
- » No-Estimation doesn't exist – even when your organization doesn't require to estimate, someday someone comes and ask about time to completion
 - » Because they would like to plan roadmap
 - » Because they need to put something into agreement with client
 - » Because business just would like to know if in half year, they will still need this button
- » Waterfall projects needs to be estimated



Hours/Man-days or Story Points

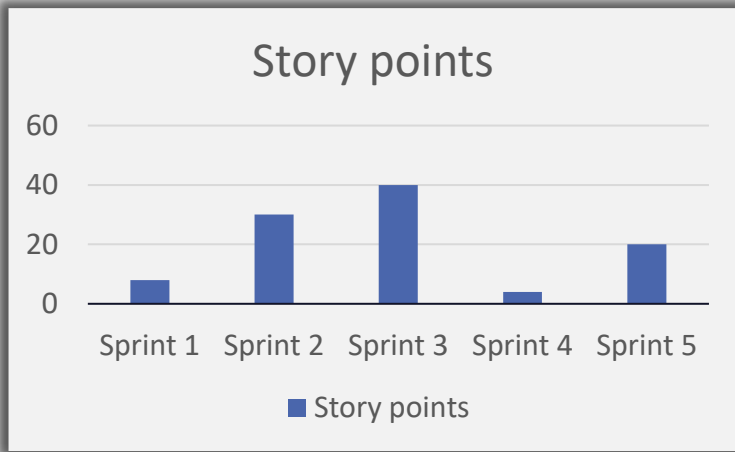


- » mBank Corporate – fully scrum way of doing project
- » All ceremonies as in the book
- » Story points as an estimation currency
- » Two days of ordering of all US in backlog
- » Poker planning
- » Scrum pushed from top management
- » Help from well known agile coaches on each step of the delivery
- » We just cannot fail ;-)



- » Second approach to story points
- » Try with different team, different company

Story Points



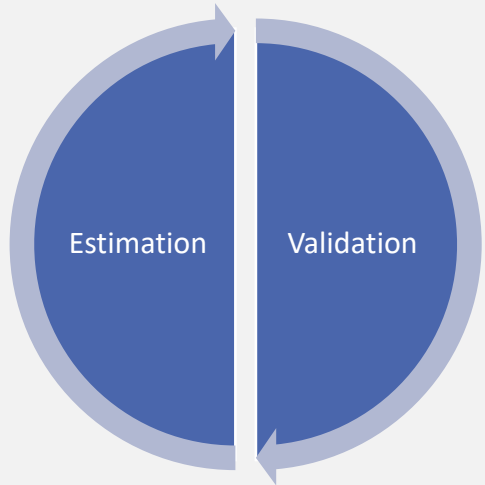
- » Story points in the sprint hadn't normalize, one sprint was 30, the other just 8.
- » During the time we also seen deflation and inflation of the story points which made prediction more difficult
- » It measures complexity not time – time also tells about it
- » But senior developer writes code faster than junior or regular one! – not true
- » Task estimated contain a lot more than code
 - » Reading the documentation
 - » Details with PO
 - » Writing code
 - » Manual test on the UI
 - » PR

Story Points



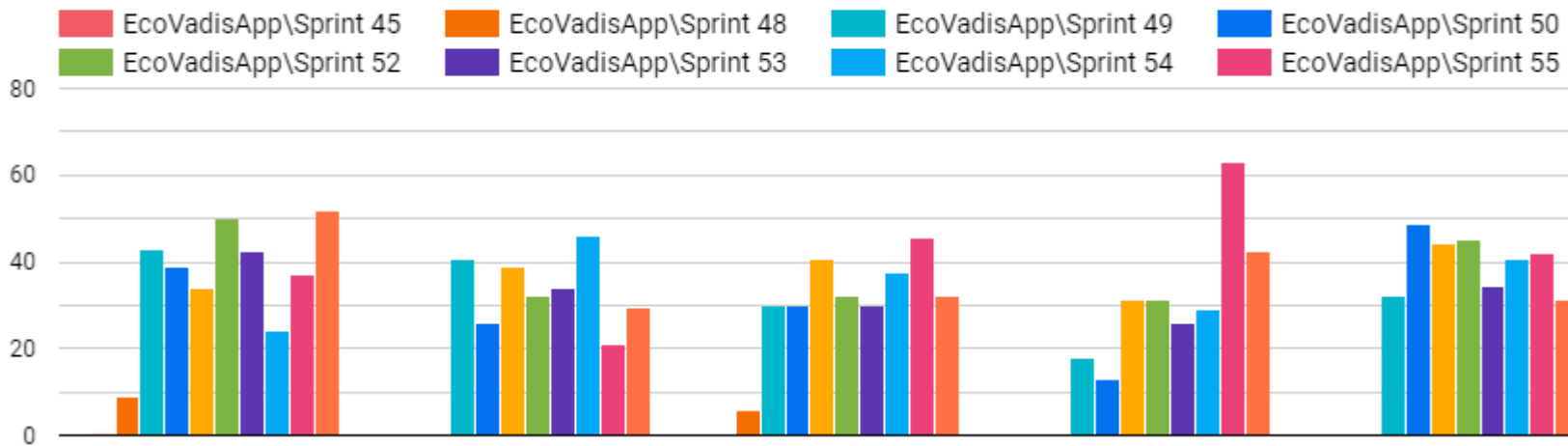
- I really appreciate that you are doing trending estimation in your team, but I need to make roadmap for next 3 years, so how much?
- Reverse estimation
 - Take story points delivered during last sprints
 - Add to the equation all absences and special events
 - Make story point/hours conversion
- Doesn't protect against inflation deflation
- Complicated
- It is very difficult to explain business that we are using story points

Small tasks (inside the sprint) hours estimation



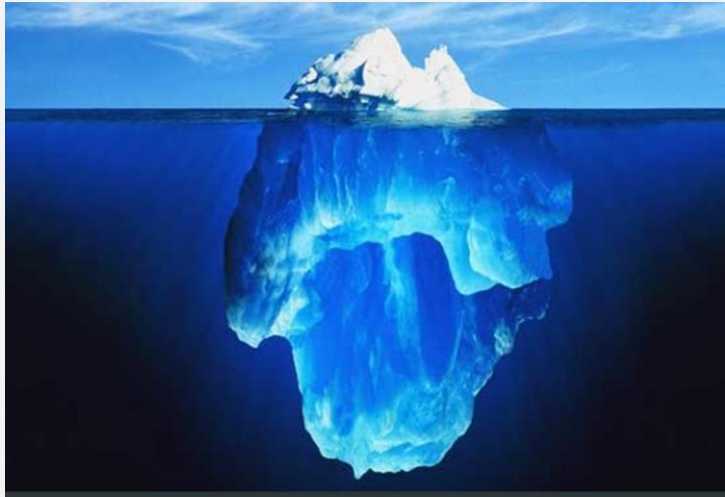
- » Detailed estimation (if general one is not enough)
- » 4 hours development day
- » Time registration for each task
- » Every standup validation if time was registered
- » During weekly meeting analysis difference between registered and estimated

Time reported in sprints by developers on tasks/bugs/stealings



- Environment setup – 0,5h
 - Coding – 1h
 - Pull request – 0,5
 - Unit tests – 1 h
 - Integration tests – 2 h
 - Manual tests – 2 h
- One-line code change costs 6h
Ten-line code change costs 6 h

Medium tasks



Without consequences

- » Just guess and add contingency
- » If you really would like to make guess more proper. Guess with the team 😊

With consequences

- » Detailed estimation
- » Estimator



Not possible projects to be estimated



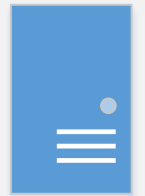
- » Around 2 years project
 - » Over one hundred technical people
 - » Setup new entity bank
-
- » Carbon module, we hadn't know anything about the requirements but one sentence

Estimator

- » Reflect all solution elements in table
- » For each element establish what simple, medium and complex change mean
- » Add additional areas which are not development, but they are needed (QA, Analysis, Deployment)
- » Make calculation of the cost



Web Application



Application Server



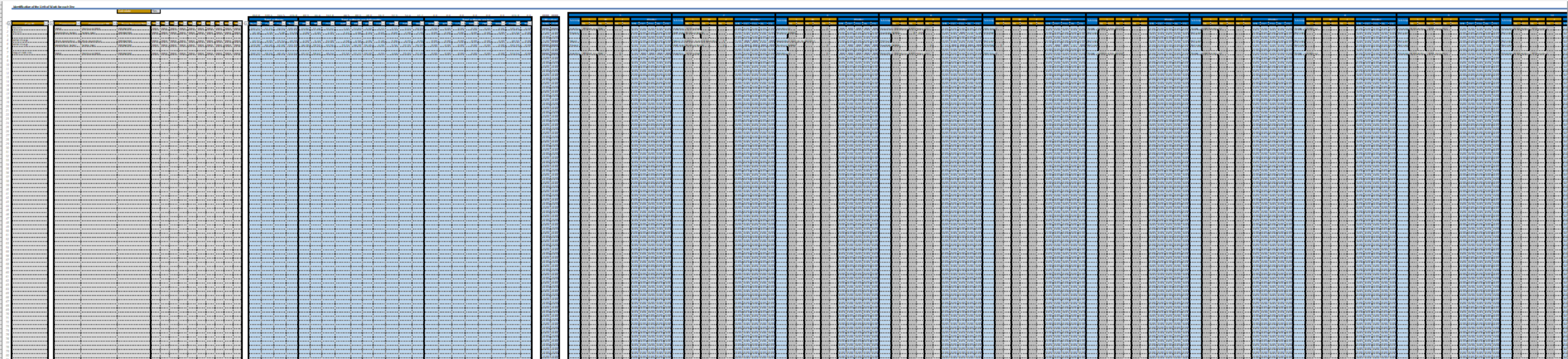
Database

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1								Changes												Description
2								Database				Application Server				WebApplication				
3	Cost	Cost with CTG		Analysis	QA	Development		Simple	Medium	Complex		Simple	Medium	Complex		Simple	Medium	Complex		
4		20%		15%	20%			4	7	12		3	8	17		1	2	3		57
5	76,95			8,55	11,4	57		1	1	1		1	1	1		1	1	1		
6	0			0	0	0														
7	12,15	14,58		1,35	1,8	9		1				1					1			New list with details
8	0			0	0	0														
9	0			0	0	0														
10	0			0	0	0														
11	0			0	0	0														
12				0	0	0														
13																				
14																				

- » Here Simple change in Database (maybe adding a column) costs 1 hour.
- » QA effort for each change is calculated as 20% of development time
- » Full cost is cumulative value from Analysis, QA and Development

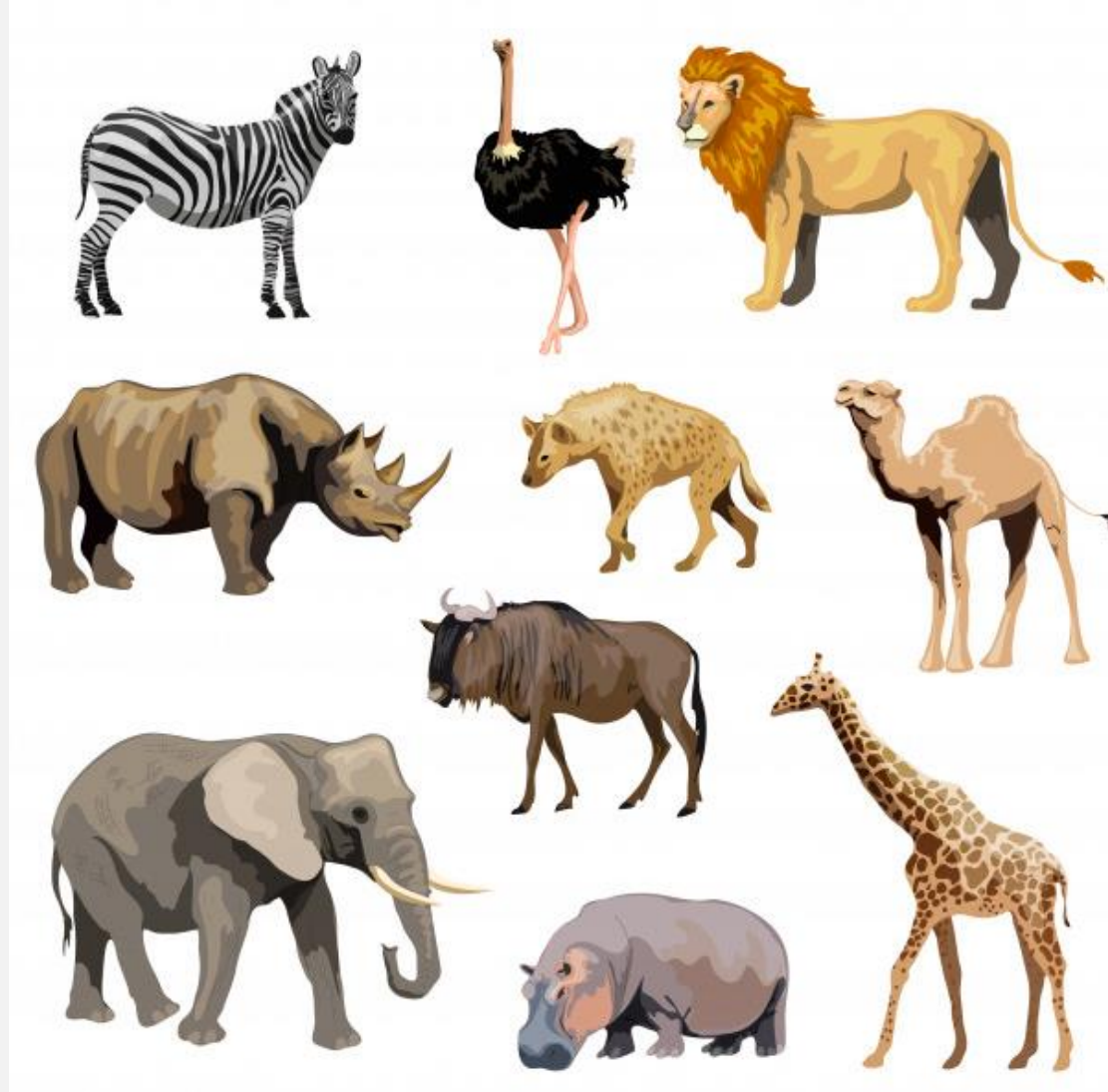
Estimator

- » Contains many systems DB, Application Servers, Queues, External interfaces, Desktop application, DWH...
- » Contains a lot of different phases of project: Development, UAT, QA, Deployment, Product Management, Functional design, technical design
- » Contains description of the changes, for the traceability purposes
- » Contains contingency for the estimation



The image displays a large, complex spreadsheet used for project estimation. The spreadsheet is organized into multiple columns, each representing a different task or phase of the project. The columns are color-coded, with blue headers and alternating light blue and white rows. The data is organized into a grid, with each cell containing a small, detailed description of the task or phase. The spreadsheet is divided into several sections, each with its own set of columns and rows. The overall layout is highly structured and detailed, reflecting the complexity of the project being estimated.

Other estimations – funny ones



Dziękuję

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