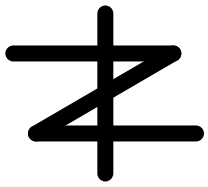

Zerocracy: A Project Manager Than Never Sleeps

Executive Summary

Yegor Bugayenko
yegor256@gmail.com
www.zerocracy.com

0.9.3

August 13, 2018

Abstract

Lack of systematic, accurate and precise project management based on data and analysis is the main failure factor in software development projects. Project managers can't do this job right, because it is routine, boring and requires a lot of time. Thanks to the growing popularity of virtual collaboration tools and emerging power of AI there is a great opportunity for Zerocracy to improve the human workforce with computers. The target market is very similar to one acquired by Atlassian over the last 15 years: it includes 40,000 companies and 5 million software developers. Using our strengths and a unique market opportunity we plan to create a new segment of AI project managers in the RPA market, engage 20,000 customers, and generate revenue of $400M.

1 Market Analysis

According to The Most Common Reasons Why Software Projects Fail article in InfoQ (July 2015), most of the problems in software projects come from: 1) Lack of substantial data and analysis; 2) Excessive personnel, added because of unrealistic predictions; 3) Inability to adjust budget and time forecasts to changing requirements; and 4) Ignoring of facts and statistics.

It is obvious that the first problem (lack of data and analysis) is the root cause of all others. The management doesn't have enough information when needed: that's why it can't make appropriate decisions and projects experience problems.

Chaos Report (2015) by Standish Group says that "Software development projects are in chaos, and we can no longer imitate the three monkeys—hear no failures, see no failures, speak no failures." The report also demonstrates that as a result of this chaos we have restarts (94% projects!), cost overruns, and time overruns. Technology incompetence is the root cause of project failures only in 7% cases. In almost all other cases the management is the source of trouble.

Thus, key pain point of software projects all over the world is lack of proper management, which should be based on systematic, accurate, and precise data collection and analysis.

Our customers are companies that run software projects.

Our market consists of the labor, tools, and services that help companies run their projects.

1.1 Competition

"Labor" is the biggest category of competition: our customers hire people in order to manage their software projects, including Scrum masters, technical leads, project managers, program managers and everybody else who manage programmers. This simple analysis of LinkedIn data demonstrates that there are over two million managers in the world (although, not all of them manage software projects). We can assume that our customers spend about $100B on salaries of project managers ($50K salary for an average manager).

"Tools" is the second category of competition, it includes task trackers, planners, and project management software. This report shows that the size of project portfolio management market is $2.5B (although, it includes services too). This report by IDC says that it is $3.7B. This report says that 7% of this market belongs to software development projects. The most popular project management software systems are MS Project, Atlassian product family, Podio, Wrike, Basecamp, and others.

"Services" is the third competitive category that includes management consulting, coaching, training, Agile certifications, and many other forms of indirect management of programmers. Bloomberg said in 2013 that the size of this market is $39B.

There is no such thing on the market as robotic project managers at the moment.

1.2 Market Size

This report says that Atlassian (NASDAQ:TEAM) has 35,000 paying customers. Their own blog post confirms that they have over 40,000 customers, acquired in less than 14 years.

ICT says that there are 11 million professional software developers in the world. At the same time, there are about five million accounts registered at StackExchange platform, which is the dominating web resource for programmers, where they ask and answer technical questions. We assume that 5 million is the amount of programmers in the world who make a living by regularly writing code.

1.3 Segmentation

While most software companies actively exploit the concept of outsourcing and offshoring in order to optimize development costs, according to Yegor's blog traffic statistics programmers are geographically located in the United States (24%), India (7%), Germany (6%), UK (6%), Russia (5%), and others.

StackOverflow annual survey demonstrates that about 12% of developers work remote full-time. 30% work remote part-time or full-time; developers with 11+ years experience are nearly twice as likely to work remote as developers

with less than 5 years experience.

LifeHacker claims that "GitHub is the juggernaut in this arena, obviously, and the web's most popular code repository," while others are CodePlex, BitBucket, LaunchPad, and SourceForge. GitHub blog announced 10 million repositories milestone in 2013.

1.4 Market Trends

Atlassian blog post notes that going remote with smaller teams (10 developers or even less) is the trend, among a few others. Gallup confirms, according to this Forbes article, that "nearly 4 out of 10 companies currently allow some employees to work remotely".

The software development industry is growing every year: by 4.5% every year according to CompTIA, by 6% according to ComputerWorld, and even faster according to VentureBeat.

Transparency Market Research in their recent report about RPA market trends notes that "automation is soon expected to become a game changing technology in the transformation of IT industry; the notion that robotic software can eliminate the need to offshore and at the same time lead to highly automated efficiency has captured the attention of a large number of IT players, globally; business process outsourcing (BPO) is one of the key segments in the IT industry where high adoption of robotic process automation is anticipated in the coming two to three years."

2 SWOT

There are a number of strengths and weaknesses in our product. Also, there are some opportunities and threats on the market.

2.1 Strengths

The idea of a robotic project manager is *unique* and hasn't been implemented yet by anyone on the Robotic Process Automation (RPA) market.

We have a patent application for it: US 12/703,202.

The concept was tested with 40+ projects and 350+ programmers.

The software was implemented and proved to be working for 4 years in Teamed.io, a software outsourcing company co-founded by Yegor Bugayenko. It was re-implemented in Zerocracy in 2017-2018 and tested for over a year in a fully autonomous mode as a Slack/Telegram/GitHub chat bot.

Founder's blog has over 50,000/mo unique visitors, most of them are from software industry: programmers, managers, founders. Besides that, Yegor Bugayenko is an author of Elegant Objects books about object-oriented programming, a regular speaker at software conferences, and an active social networker (12K+ Twitter followers, was recently mentioned by TechBeacon as one of 39 Java leaders and experts to follow on Twitter). The early adoption of Zerocracy comes from this audience.

Erik J. Larson (scientific adviser) has over a decade of experience in scientific research on AI, with a focus on dialogue systems and natural language processing, central to Zerocracy core technology. Larson is also a writer and speaker on issues in AI, and will be active in evangelizing Zerocracy technology.

Yegor Bugayenko possesses project management certifications, including PMP, PRINCE2, MSF, RUP, and COSMIC. This means that he has a strong background in project management and understands its problems, risks and opportunities.

Yegor has some experience in making products for software industry. For example, there are few of his recent "pet" projects: rultor.com (300+ customers), s3auth.com (1200+ customers), jare.io (100+ customers).

2.2 Weaknesses

The uniqueness of Zerocracy management model and it's strict focus on quality and results makes it's difficult to engage a large amount of programmers. Thanks to the large market of traditional working models (pay by time), very few programmers are interested in working with Zerocracy if their rates are similar to the ones they earn in their full-time jobs. However, it's impossible to pay them 3+ times more, because there is no strong customer base as of yet.

2.3 Opportunities

We may acquire the entire emerging market, since we're the first player.

Since the lack of proper project management is a constantly growing concern in software projects, addressing it now with AI may put us in a driver's seat for the entire software industry.

2.4 Threats

Competitors may quickly catch up, since the concept is very visible and transparent since its market launch.

3 Objectives

Our objective is to build a market of robotic project management and acquire its majority. Our long-term goal estimate is 20,000 customers in eight years.

Financial objective is $400M revenue with profit margin over 80%. Such a high margin can be achieved due to our AI-as-a-service business model, where growth of the customer base has almost no impact on the structure and volume of our fixed costs.

Atlassian is a good case study for us. Their revenue was $457M in the last 12 months. They are a public company (on NASDAQ since 2015). Their market cap is $6.6B. They are our indirect competitors, which means that their clients can become our customers without leaving Jira.

Short term technical objectives include the following features:

- More sophisticated natural language processing (NLP) in the chat bot;
- Proper risk analysis;
- Integration with other task trackers, e.g. Jira, and Trello;
- More prediction algorithms with more metrics;
- Direct access to the pool of freelancers (recruit-as-you-go);
- Change request instant estimates;
- Benchmarking;
- ISO-9001, ISO-27000, and CMMI certifications.

Long term goal is to expand our solution to other verticals, including construction, healthcare, education, etc. Boldly, we estimate the entire potential of the market at $100B, when all routine project management roles will be filled by AI.

4 Marketing Strategy

Our USP is: "a project manager that never sleeps."

Our market positioning will have four anchoring points:

- "Friendly": it is a chat bot that helps us coordinate ourselves;
- "Adaptive": it immediately re-builds plans when requirements change;
- "Smart": it predicts problems even before we can think about them;
- "Objective": its decisions are based on data, not emotions.

The list of benefits a customer gets from our solution:

- Cost and schedule overruns are eliminated;
- Project schedule and budget are visible and updated instantly;
- Developers have clear plans and instructions;
- Management always have enough information to make decisions;
- Productivity of programmers increases;
- Staff turnover decreases;
- Cost of management is minimized.

The cost of hiring a Zerocracy is proportional to the number of tasks it is managing in a particular project: "pay-per-task" (PPT) cost model with a fixed price of $4.00/task. According to our experience, in an average project an average programmer completes 50 tasks per month, provided an average task takes approximately 2 hours of work. Thus, a project of ten people, at its peak performance, completes 500 tasks per month. The cost of Zerocracy in this scenario is thus $2,000.

This is what an average software team of 10 people (USA, Western Europe, distributed) spends annually:

Expenses	Annually
Payroll ($60K per person)	$600,000
Project manager	$60,000
W2 taxes, fringe benefits (20% of payroll)	$132,000
Office, computers, office expenses	$60,000
Recruiting	$120,000
Management consulting, trainings, coaching	$15,000
Servers, cloud, etc.	$12,000
GitHub private repositories	$1,200
MS Project license (2 years term)	$550
JIRA license	$1,000

An immediate financial effect for our customers would be minimization of labor expenses ($60K), entire removal of management consulting ($15K) and project management tools ($550). Thus, Zerocracy will cost them $24K, while their savings will be over $75K (even though this is not our primary selling point).

We don't expect our customers to eliminate their project managers. Instead, we expect them to transfer personnel to more creative roles, like requirements analysis, product validation, strategic planning, etc.

Our promotion strategy includes:

- Consumer training programs;
- StackOverflow banner ads;
- Twitter promoted ads;
- Reddit campaigns;
- Direct door-to-door sales (enterprise customers);
- User conferences;
- Free on-site and online consultation sessions;
- Free webinars;
- Sponsorship of software and management events;
- Partnerships with GitHub, Bitbucket and similar platforms;
- Benchmarking competitions among champion customers;

- Grants and donations to young programmers and their projects;
- Blogs with analysis and statistics of our AI software.

5 Financials

Before a programmer is ready to join a real project, he or she has to be trained in a "sandbox" project. According to our current Policy, the programmer has to earn 1024 reputation points in order to "graduate." One reputation point is given for each minute earned. With the attractive hourly rate of $50, and an average rejection rate of 70% (this is how many people quit the platform because they can't put up with our strict requirements), the "acquisition cost" of one developer is close to $3,000.

A motivated and graduated programmer at an average pace can close 8 tickets per day, working 20 days a months. This means $4,000 monthly income for a programmer and $1,280 revenue for Zerocracy (we will charge $8 per ticket).

Thus, every $100K invested into sandbox projects produce 30 graduated programmers, ready to work in real projects and generate $40K per month in revenue.

6 Business Plan

Phase I: The goal is to increase Zerocracy capitalization up to $100M and prepare for the first round of venture capital.

- We raise $1.6M of private funds (pre-money cap is $16M);
- We list Zold in a top-20 crypto exchange ($200K);
- We graduate 200 developers ($600K);
- We get 10 paying customers on board ($100K);
- We promote Zold in the crypto community ($500K);
- We continue the R&D of Zold to prove its technical qualities ($200K);
- We secure the revenue of $200K/mo;
- We raise $2M via Zold emission.

Phase II: The goal is to raise the first round of venture capital and secure the revenue of $400K/mo.

- We raise $10M of venture capital (cap is $100M);
- We list Zold in a top-5 crypto exchange;
- We graduate 500 more developers;
- We get 20 new paying customers on board;
- We keep promoting Zold in the crypto community;
- We raise additional $10M via Zold emission.

Phase III: To be defined later...