Aggregated Velocity Assessment

Evaluating organizational velocity trends at scale

Linearity
Stability
Focus Factor
Impact of Deadlines

Case Study by Robert Frohman
Jeff Sutherland & Scrum Inc.® 1993 – Present

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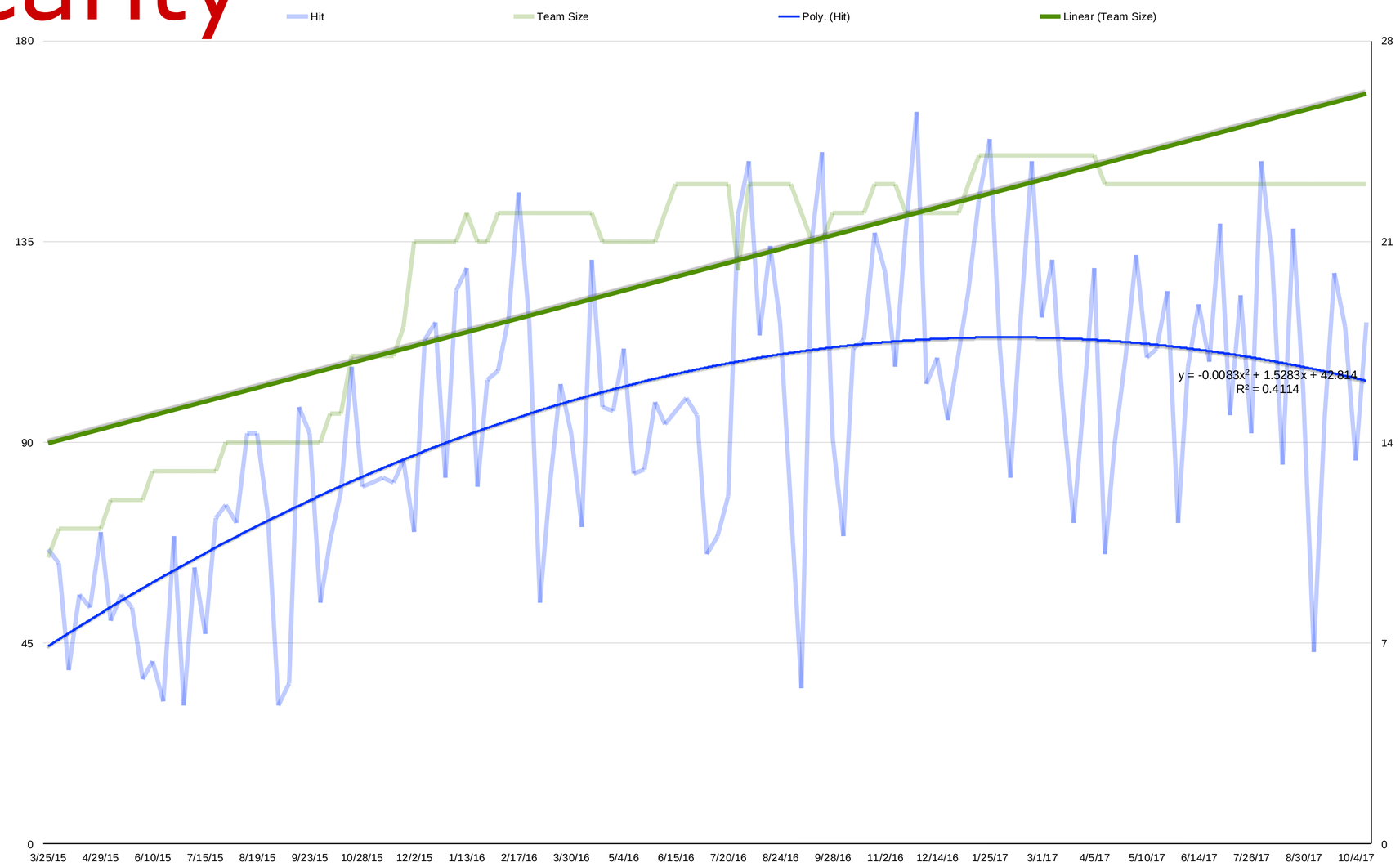
Linearity

- The Idea: Evaluating aggregated velocity of a program (up to 7 teams) and tracking against hiring could result in linearity as the organization scales.
- The approach: These data demonstrate a lean startup as it grew from 2 collocated engineering teams with 10 people to 5 distributed engineering teams with 22 people over the course 2 and a half years.
- Takeaway:
  - Largest team growth took place in the first year and the team may have exceeded linearity.
  - As team size stabilized other pressures were involved including the first deadlines the team needed to meet.
  - Over time the team continued to grow minimally however the pace was not sustained.

Linearity



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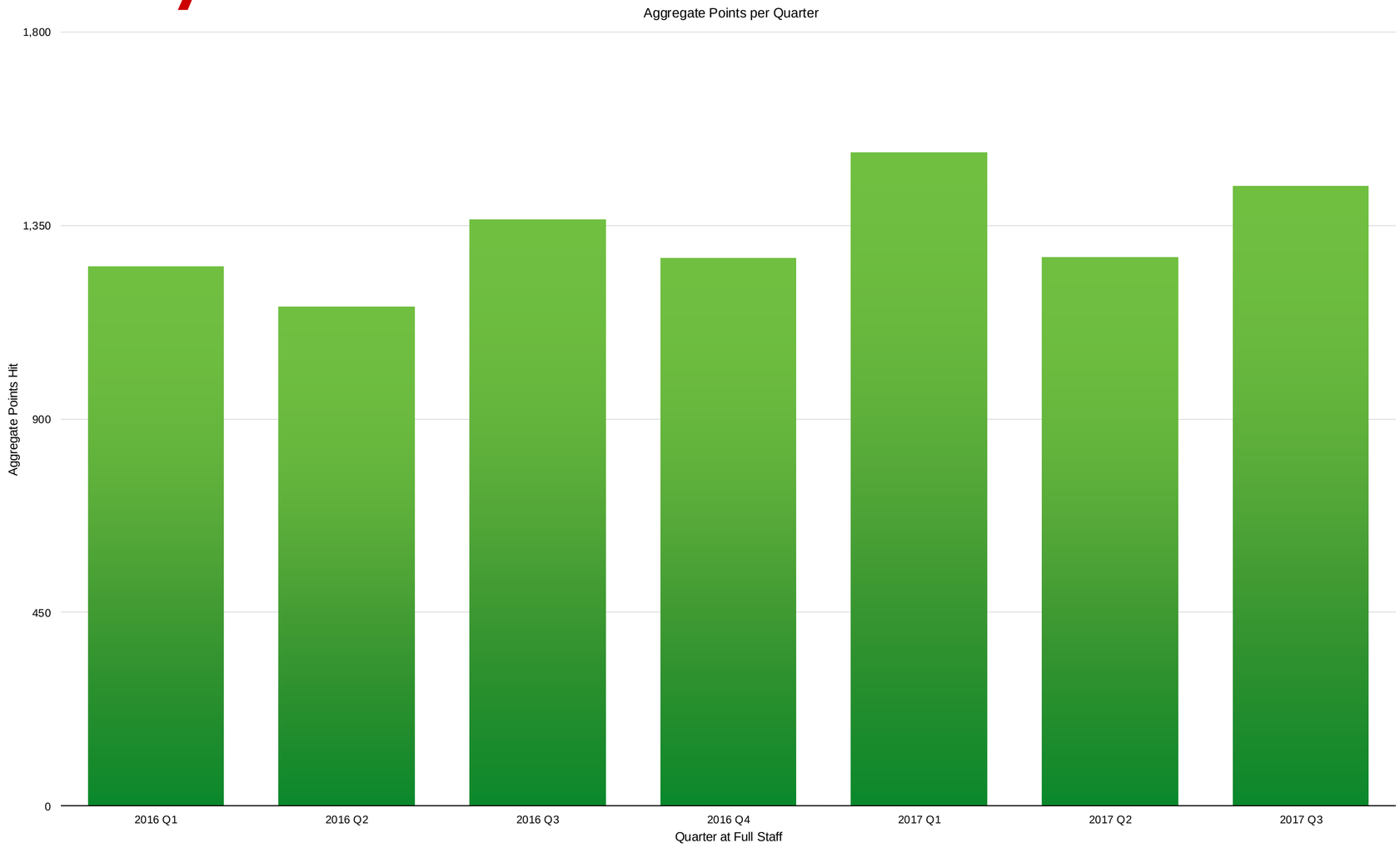
Stability

- The Idea: Individual team capacities, velocity in this case, may vary widely over time. However programs can demonstrate remarkable stability
- The Approach: Data set includes the same 5 engineering teams once they had reached a point of stability in team growth. Velocities were aggregated across all 5 teams and by quarter.
- Takeaway:
  - While there was some variability it was significantly lower than individual team variability.
  - This demonstrates the power of forecasting the capacity of a program, as a better indicator of performance over a specific team.

Stability



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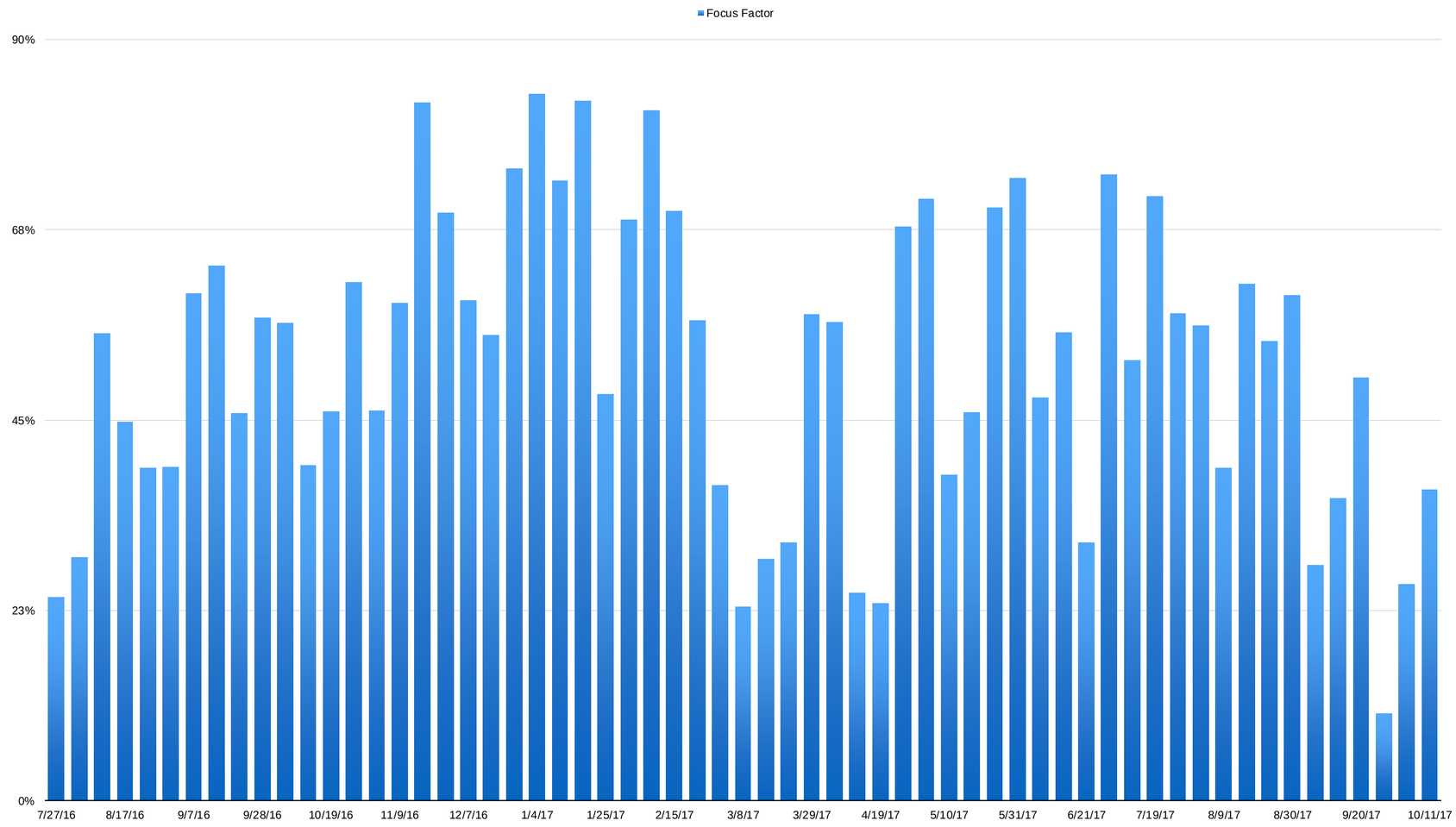
Focus Factor

- The Idea: From sprint to sprint any team will change its focus however if we aggregate that across a program the data normalizes and establishes how much work a team is executing in feature work, defects and infra-ops.
- The Approach: Velocity spread across the same 5 teams over time and separated into 1) Feature Work 2) Defects 3) Infra/Ops. Note that the team was not separating velocity until roughly July 2017.
- Takeaway:
  - There was variability over time in feature factor, demonstrating the ability of a team to adapt and use focus factor as a dial.
  - Over two years, roughly 50% of the teams capacity was focused on feature work. This is the measure that should be used when forecasting feature backlog delivery.
  - This is not a budget but a lagging indicator that demonstrates what work was actually taken on - affect it by ensuring prioritization of the program backlog and set expectations with teams on the balance

Focus Factor



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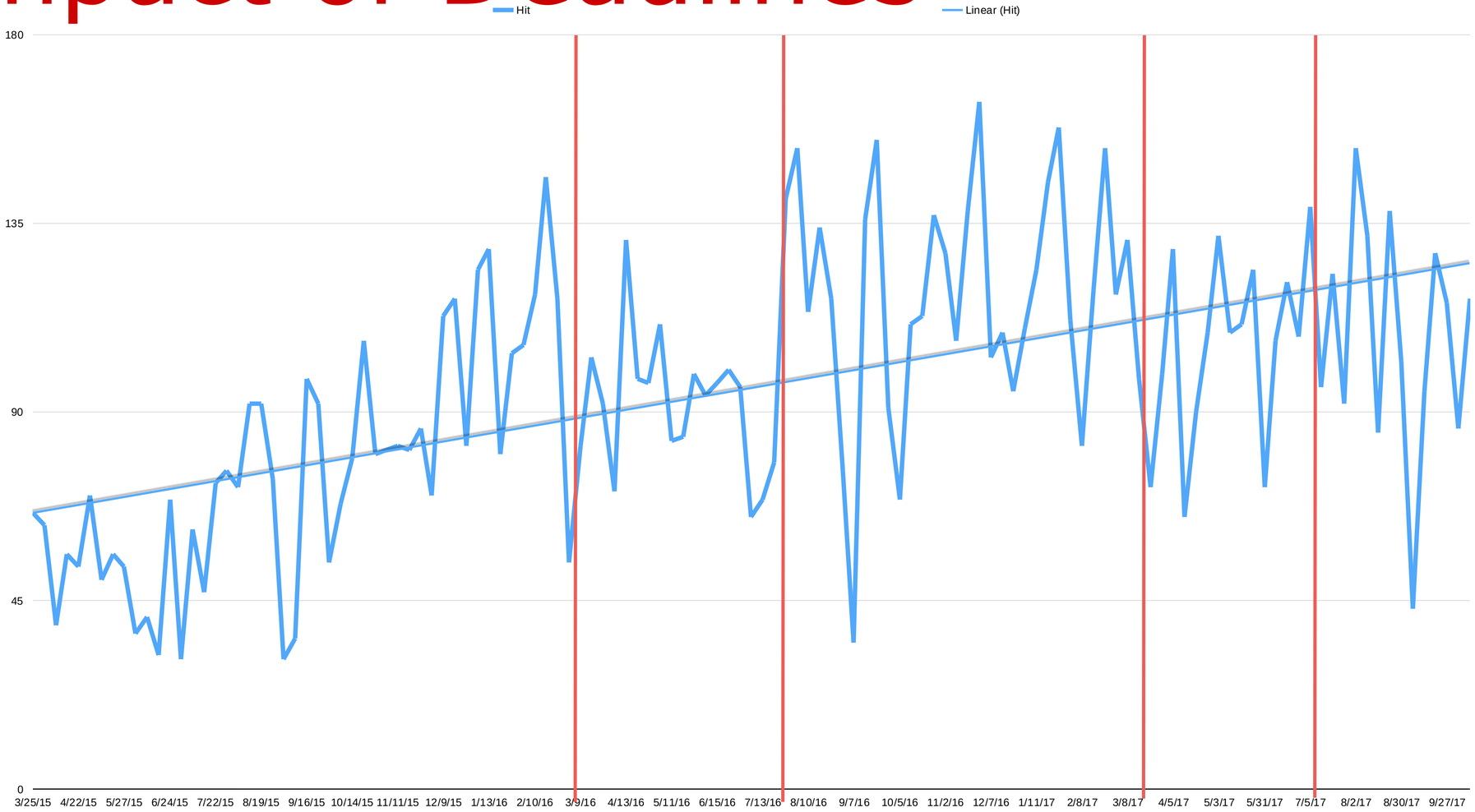
Impact of Deadlines



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