

UNDERSTANDING THE IMPACT OF TECHNICAL DEBT ON THE CAPACITY AND VELOCITY OF TEAMS AND ORGANIZATIONS

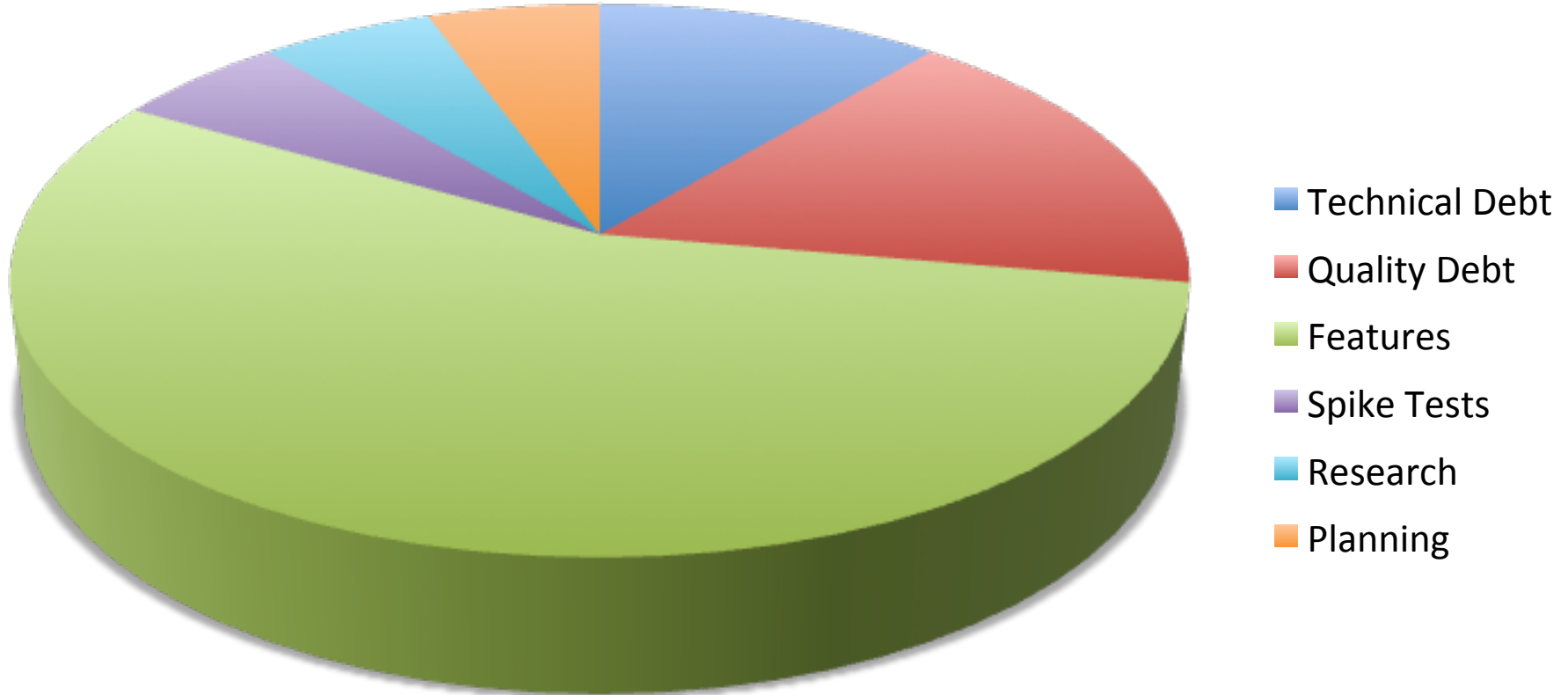
Ken Power, Cisco Systems, Galway, Ireland



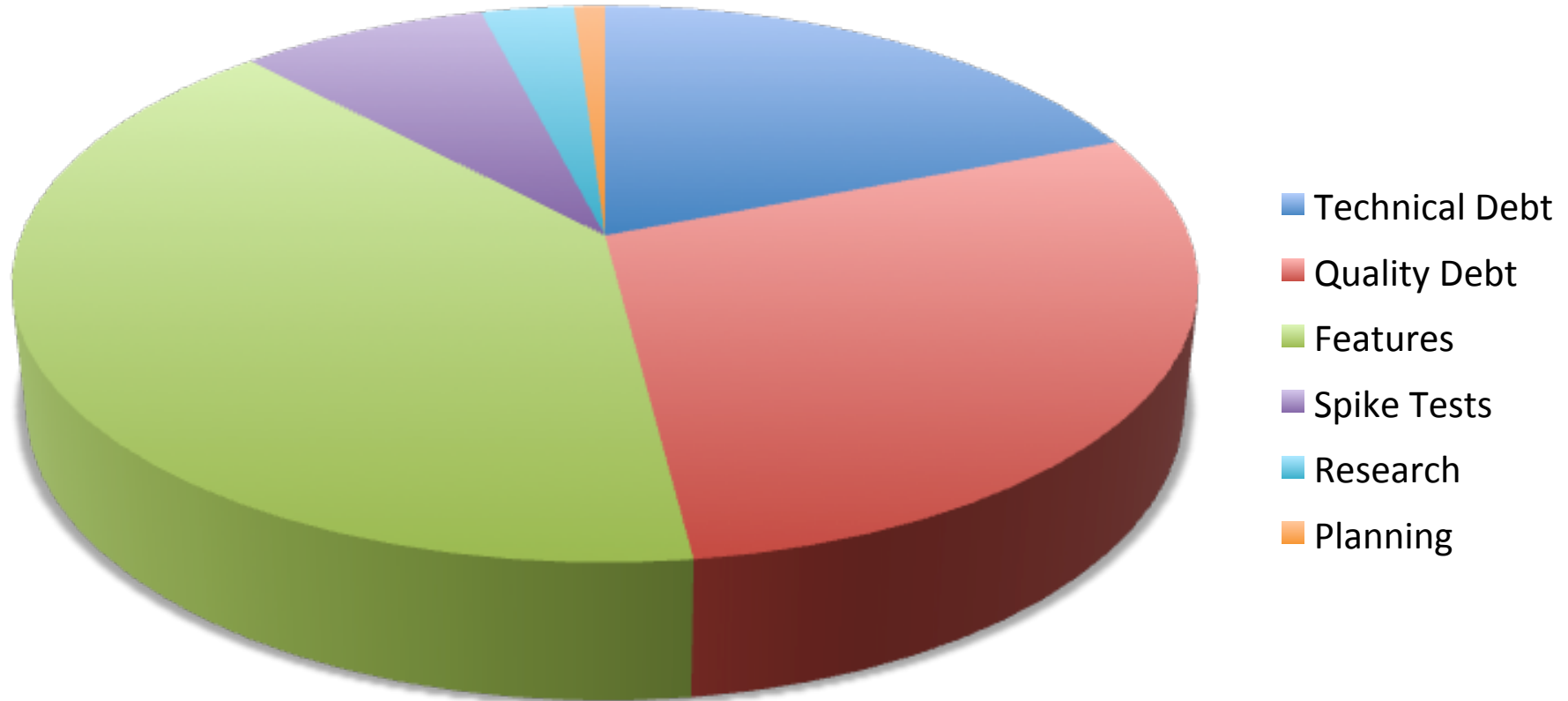
Options for Investing Capacity



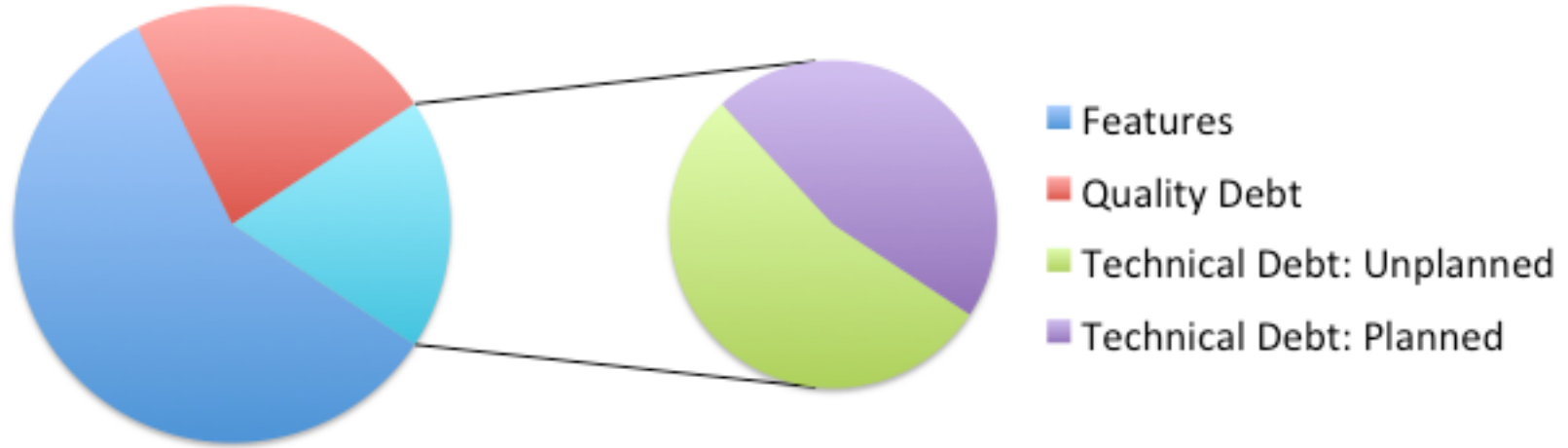
Balanced Investments



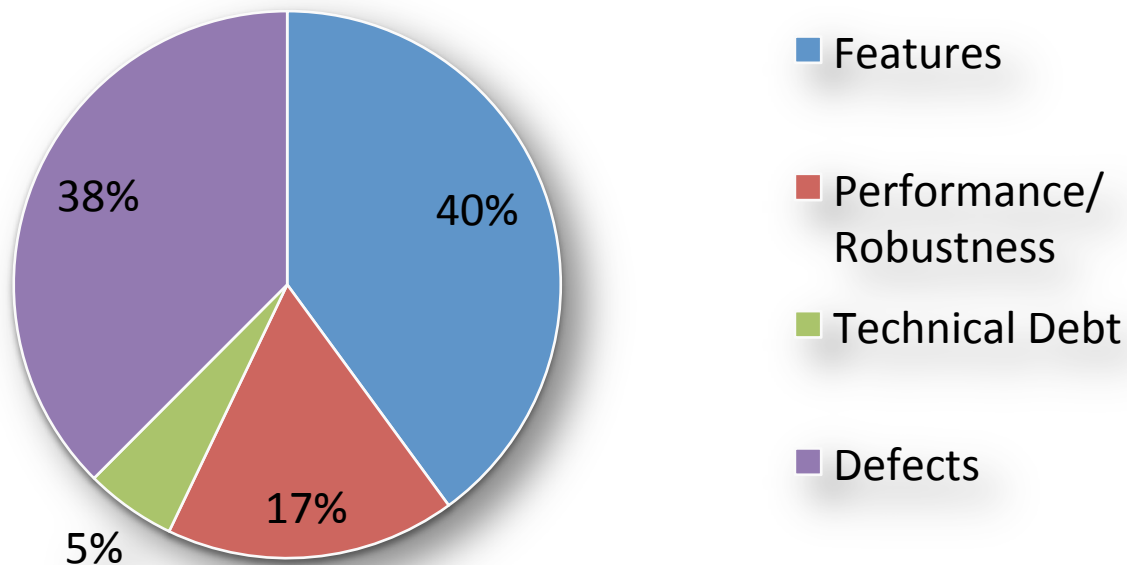
Unbalanced Investments



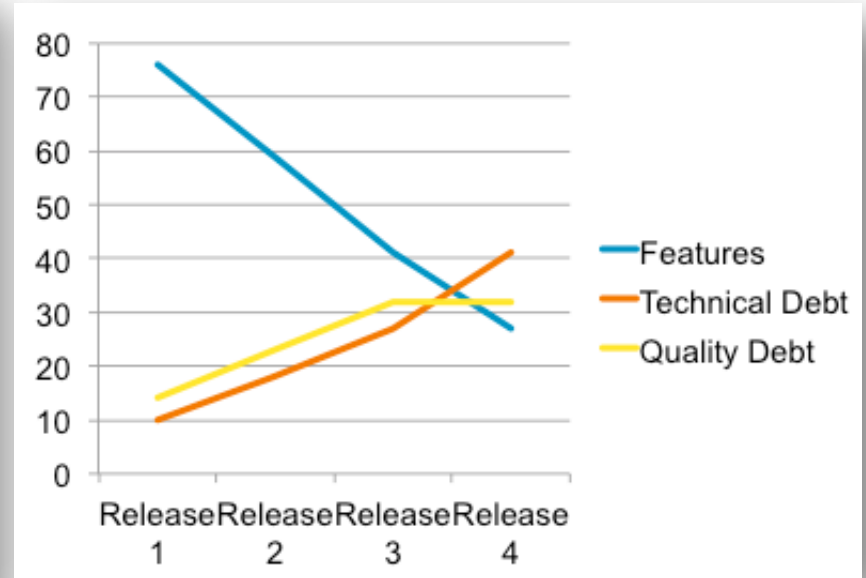
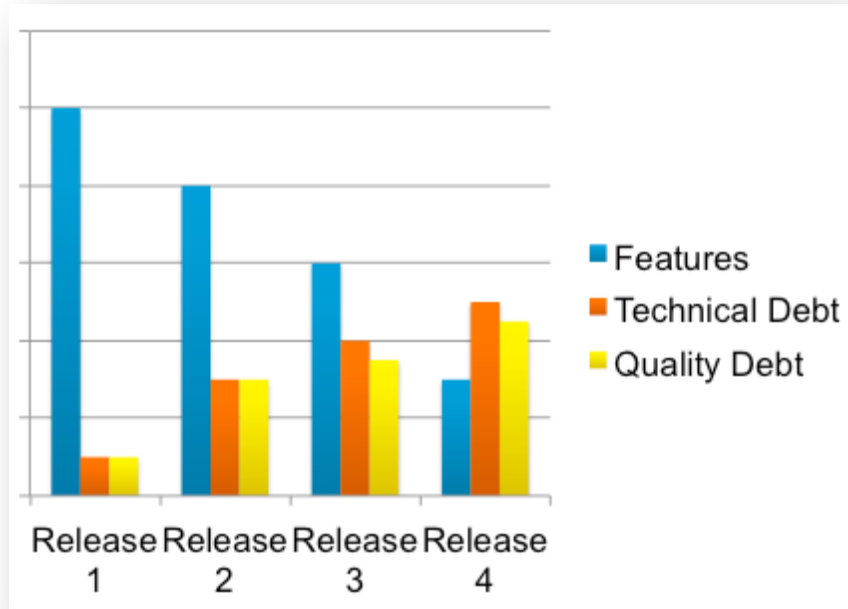
Planned v Unplanned Technical Debt



Insufficient Investment in Debt Reduction



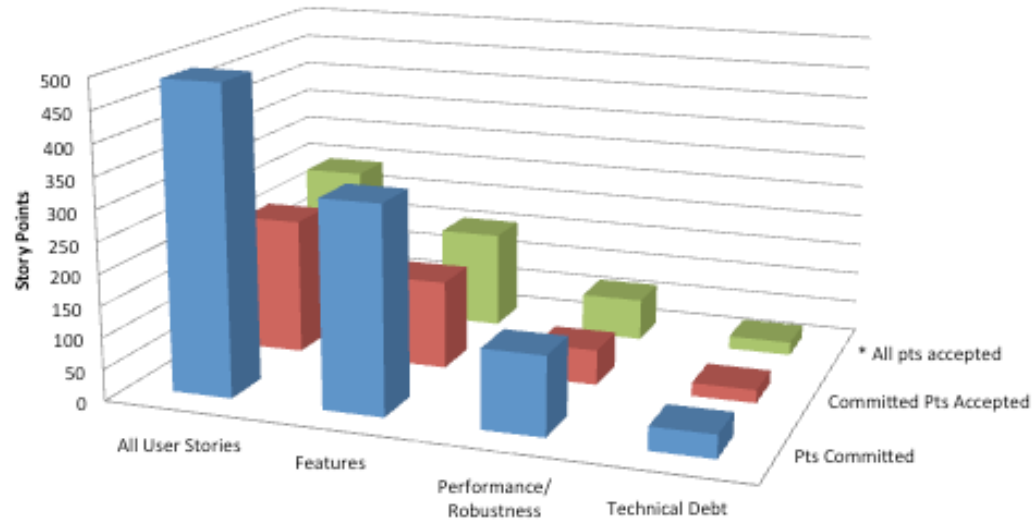
Mounting Debt Impacts Velocity



When Failure Demand Dominates Throughput

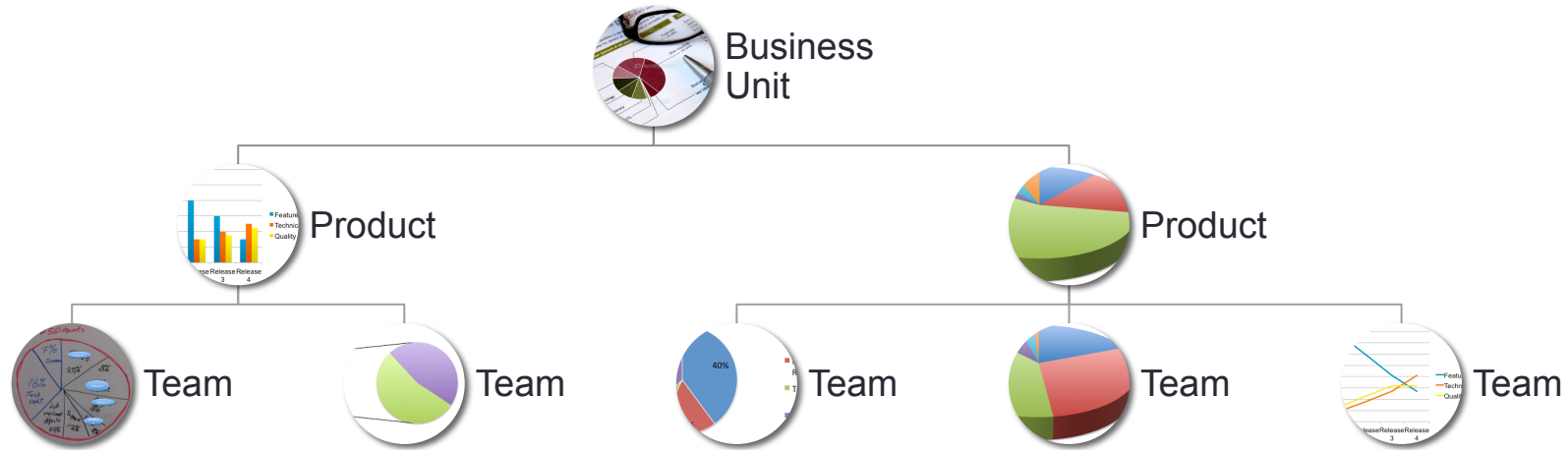


Planned v Actual Debt Reduction



	All User Stories	Features	Performance/ Robustness	Technical Debt
Pts Committed	490	328	125	37
Committed Pts Accepted	218	141	56	21
* All pts accepted	244	156	67	21

Technical Debt Impacts Organization Capacity



Conclusions

- **Visualize** Technical Debt
- Articulate debt reduction **strategies**
- Consider each strategy as an **option**
- **Quantify** the impact and benefit of each option
- Understand the effect on team, product and organization **velocity**
- Understand the effect on team, product and organization **capacity**

Thank You!

- My day job
 - Co-Founder, Agile Office at Cisco
 - Internal Agile & Lean Consultant
- Extra-curricular activities
 - Fellow of the Lean Systems Society (<http://LeanSystemsSociety.org/>)
 - Award-winning publications in Agile and Lean product development
 - Frequent speaker at major international Agile and Lean conferences
 - Involved in organizing international Agile and Lean conferences
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