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The paper *"How Much Up-Front? A Grounded Theory of Agile Architecture"* published on 2015 in IEEE/ACM 37th IEEE International Conference on Software Engineering, explains the findings on the balance between software architecture and agility by Michael Waterman, from Specialised Architecture Services Ltd; James Noble, from School of Engineering and Computer Science Victoria University of Wellington, New Zealand; and George Allan. The authors primarily collected the data through face to face interview, on average 70 minutes longs, with agile practitioners who design or use architecture. In addition, the research used grounded theory methodology, which is used to investigate people, interactions and processes. This method was selected because architecture is very dependant on the teams and architects.

The key concepts of the research was that there needs to be a balance between agility and structure, which are evident in the following things described in the paper:

- Requirements Instability: This refers to the effects unstable requirements have on up-front planning. Therefore, many teams focuses only on high levels requirements upfront. In addition, keeping design simple helps with this as things are easier to implement.
- Technical Risk: This describes the effect that a negative outcome has on a team's upfront effort. Teams can leverage this by have some structure at the beginning (the most important) and leaving some features undefined to allow for faster changes in the future.
- Early Value: This refers to a customer's need to gain value from a system or product being built, something like a minimum viable product. Therefore, teams should only consider requirements that are immediately needed for its design.
- Experience: The more experienced the architects are the easier it will be to adapt to change and requirements.
- Team Culture: It describes the effect that a team's culture has on its agility and the effort it puts into up-front planning. This is greatly affected to the size of the team as smaller ones are more agile and able to communicate with each other.

- Customers Agility: A customer must have an agile culture that is similar to the team's culture, because Highly agile customers do not require their development teams to produce excessive documentation or plans.

In addition, the authors say that big design up front usually depends on the the culture, team structure, and size of the team. This is because smaller teams can use a more agile and emergent design, while bigger companies with a less agile customer will require more structure and documentation, which is used in the big design up front approach. In short, it is important for teams to balance having a structure and being able to respond to change to be successful.