Software Architecture

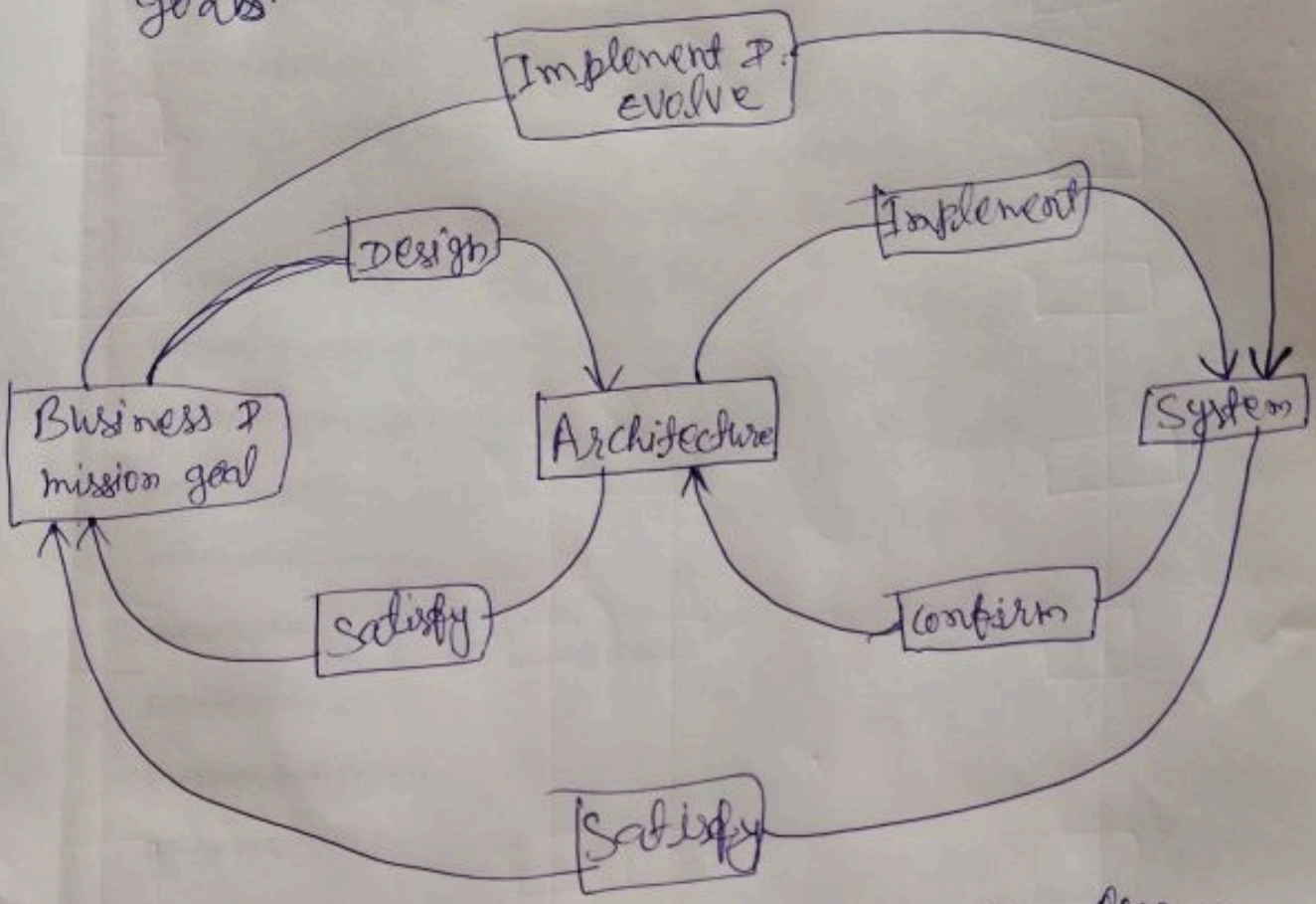
We all know that the quality & longetivity of a software-reliant system is largely determined by its architecture. The architecture is right abstraction for performing ongoing analysis throughout a system lifetime.

So, software is high level system design providing system-level structural abstraction and quality attributes which help in managing complexity. It allows us to make engineering trade-off.

Trade off its not only about its functionality, it is also about quality attributes. Quality attributes are properties that system needs for high quality such as its performance, availibity, interoperability etc.

When we think about system, we have some business & mission goals & we like to implement it - to develope our software to get the system that satisfies us. The central role

architecture shows us the way of implementing our business & mission goals.



Central role of Architecture

So we can say that architecture-centric links to business goals & explicity involves system stakeholders. The advancement has happened over the years in architecture & its pattern, component based approaches, framework and its platforms and standard interfaces are some of the advancement.

Some of the software development trends such as application framework, open source, cloud, NOSQL, ML, Dashboards, DEVOps etc. has brought some of the new technical challanges such as software assurance, scale & accelerating capability etc. and we can say that architecture is the enabler for trade-off analyses.

Moving to the first challange which is accelerating capability. In that architecture was developed incremently, the quility of the system was delivered as expected.

Quality attributes are delivered from company and mission goals are properties of work products or goods by which stakeholders rate their quality, need to be defined in a system specific manner.

1.) Performance & availability
2.) Interoperability.

3.) Modifiability
4.) Usability
5.) security.
Other quality aspects are included.

→ Micro frontends, they are designed to bring the same microservices benefits to the UI layer.

Conclusion, so, software architecture began in the 1980s and was best left until the early 2000s, before our brave new world of social media, cloud computing, mobile computing, and everything else, the principles of software architecture & their importance persist.

The architecture of a software-reliant system determines its quality and endurance.