

The Four Pillars of Service-Orientation

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Service-Orientation & SOA 101

- There is a set of strategic goals associated with service-oriented computing.
- These goals represent a specific target state.
- Service-orientation is the paradigm provides a proven method for achieving this target state.
- When we apply service-orientation to the design of software, we build units of logic called “services”.
- Service-oriented solutions are comprised of one or more services.
- To build successful service-oriented solutions, we need a distributed technology architecture with specific characteristics
- These characteristics distinguish the technology architecture as being service-oriented. This is SOA.



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Four Pillars of SOA

- Proven practices, patterns, principles, and technologies exist in support of realizing and applying service-orientation.
- However, because of the distinctly strategic nature of the target state that service-orientation aims to establish, there is a set of fundamental critical success factors that act as common pre-requisites for the adoption of service-orientation.
- These critical success factors are referred to as **pillars** because they collectively establish a healthy foundation upon which to build, deploy, and govern services.



Pillar # 1: Teamwork

Teamwork

“SOA is a Team Sport”
– *Dennis Wisnosky*

- Traditional silo-based applications require cooperation among members of individual project teams.
- Service-oriented solution delivery requires cooperation **across project teams**.
- The scope of required **teamwork** is essentially larger with new dynamics, roles, and relationships.
- Those across the team will need to trust and rely on each other; otherwise the team will fail.



Pillar #2: Education

Education

- How can cooperative team members function effectively and learn to rely on and trust each other? **Education.**
- A common education in service-orientation, SOA, and service technologies establishes a **common communications framework** among all team members.
- Combining teamwork and education establishes a foundation of knowledge and an understanding of how to use that knowledge among project team members.
- The resulting clarity of concepts, method, and the target state that everyone is working toward eliminates many of the common risks that have plagued SOA projects.



Pillar #3: Discipline

Discipline

- How can we establish the necessary consistency for the use of knowledge amongst a cooperative team? **Discipline.**
- To be successful as a whole, team members must be disciplined in how they apply their knowledge to how they carry out their roles.
- Required measures of discipline are commonly expressed in **methodology, modeling, design, and governance standards.**
- Even with the best intentions, an educated and cooperative team without discipline will fail.



Pillar #4

So far we've established that we need:

- larger, cooperative teams that have...
- a common education in fields pertaining to service-orientation and that...
- follow common methodology and standards in a disciplined manner

How can this be realistically achieved?



Pillar #4: Balanced Scope

Balanced
Scope

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Pillar #4: Balanced Scope

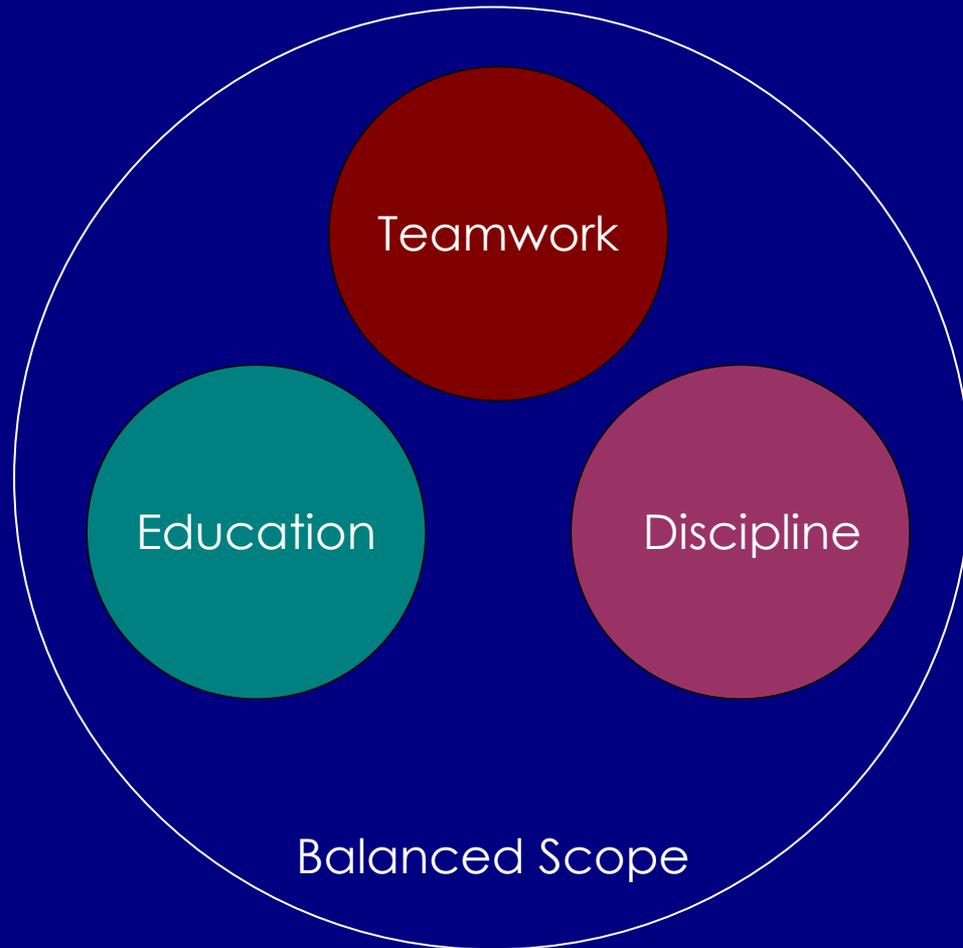
Balanced
Scope

“The scope of SOA adoption can vary. Keep efforts manageable and within meaningful boundaries.”

– *SOA Manifesto* (www.soa-manifesto.org)

- The scope of adoption needs to be meaningfully cross-silo, while also realistically manageable.
- This requires the definition of a **balanced scope** of adoption of service-orientation.

Once a balanced scope of adoption has been set, this scope determines the extent to which the other three pillars need to be established.



Conversely, the extent to which you can realize the other three pillars will influence how you determine the scope.



Pillar #4: Balanced Scope

Balanced
Scope

- The scope of adoption needs to be meaningfully cross-silo, while also realistically manageable.
- This requires the definition of a **balanced scope** of adoption of service-orientation.
- Common factors involved in determining a balanced scope include cultural obstacles, authority structures, geography, business domain alignment, available stakeholder support and resources.



Pillar #4: Balanced Scope

Balanced
Scope

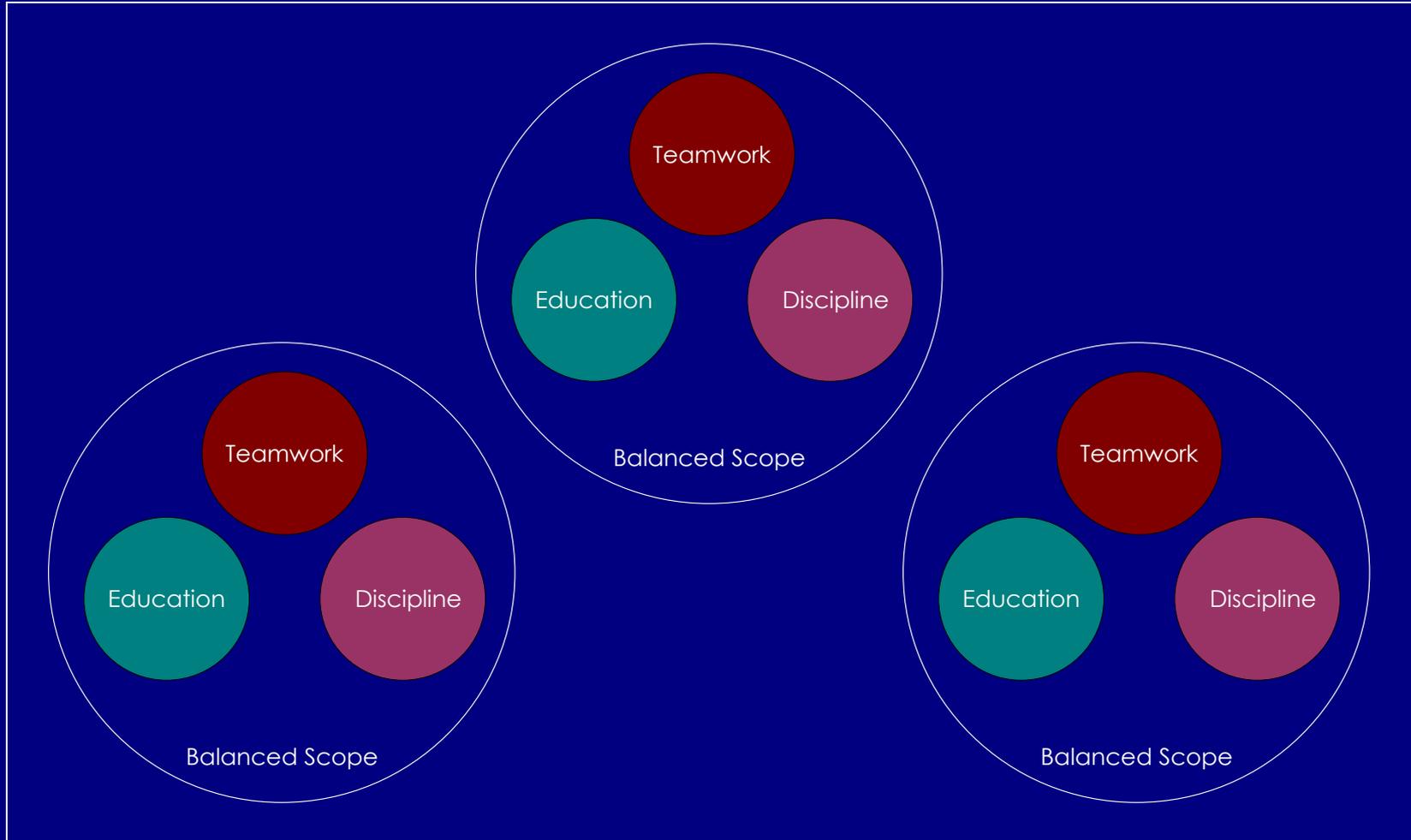
- A single organization can choose one or more balanced adoption scopes.
- Having multiple scopes results in a **domain-based approach to adoption**.
- Each domain establishes a boundary for an inventory of services.
- Among domains, adoption of service-orientation and the delivery of services can occur independently.
- This establishes “**continents of services**” within the IT enterprise.

(This concept originated with the Domain Inventory pattern.)



Pillar #4: Balanced Scope

IT Enterprise





Conclusion

- Teamwork, education, and discipline represent foundational critical success factors for the successful adoption of service-orientation.
- Setting a meaningful and manageable scope of adoption determines establishes a boundary determines establishes a boundary in which services are to be delivered and consequently determines the extent to which these three critical success factors need to be realized.
- Setting a balanced scope is a strategic planning decision and therefore itself a critical success factor.



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