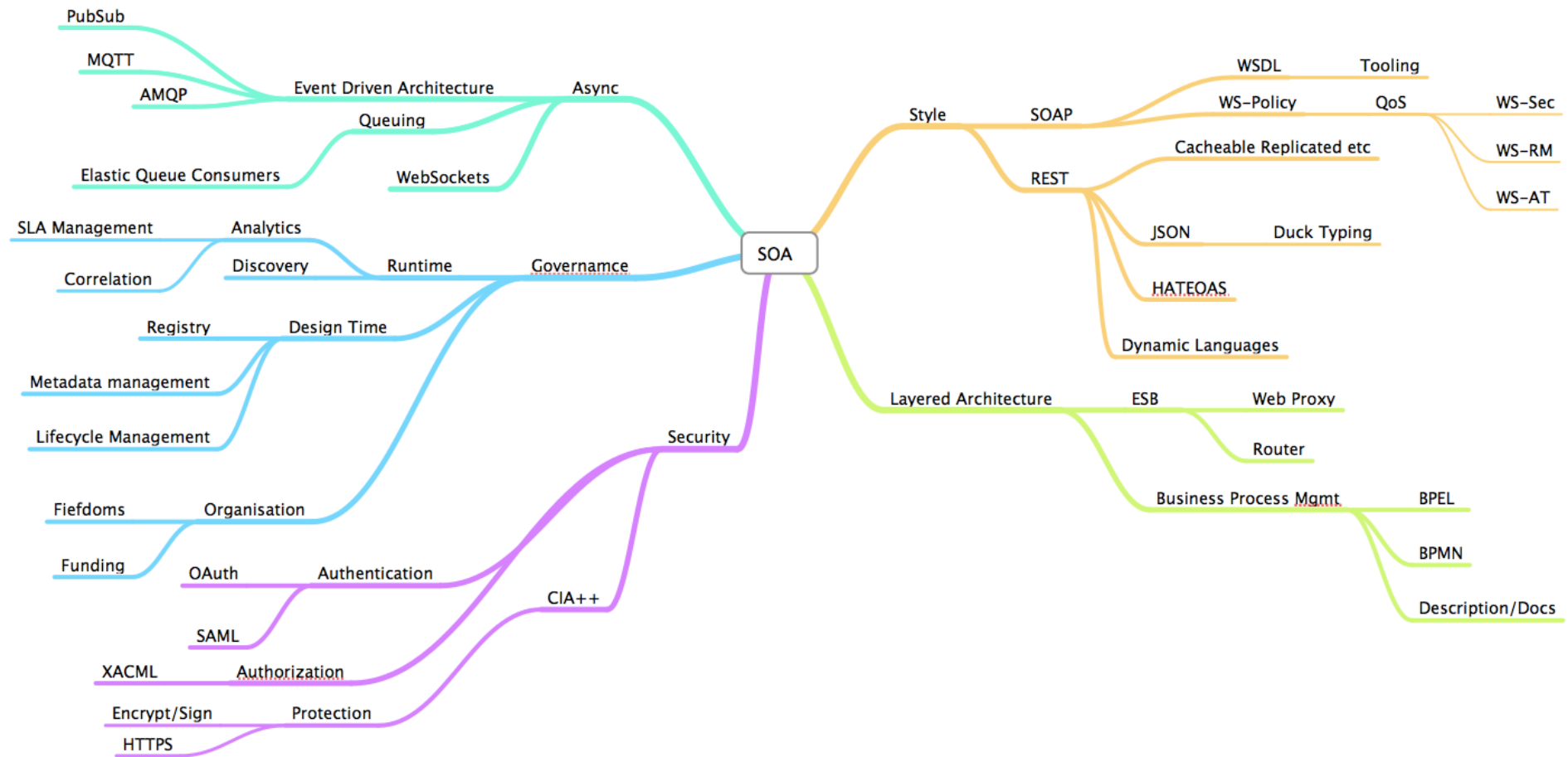


Conclusions

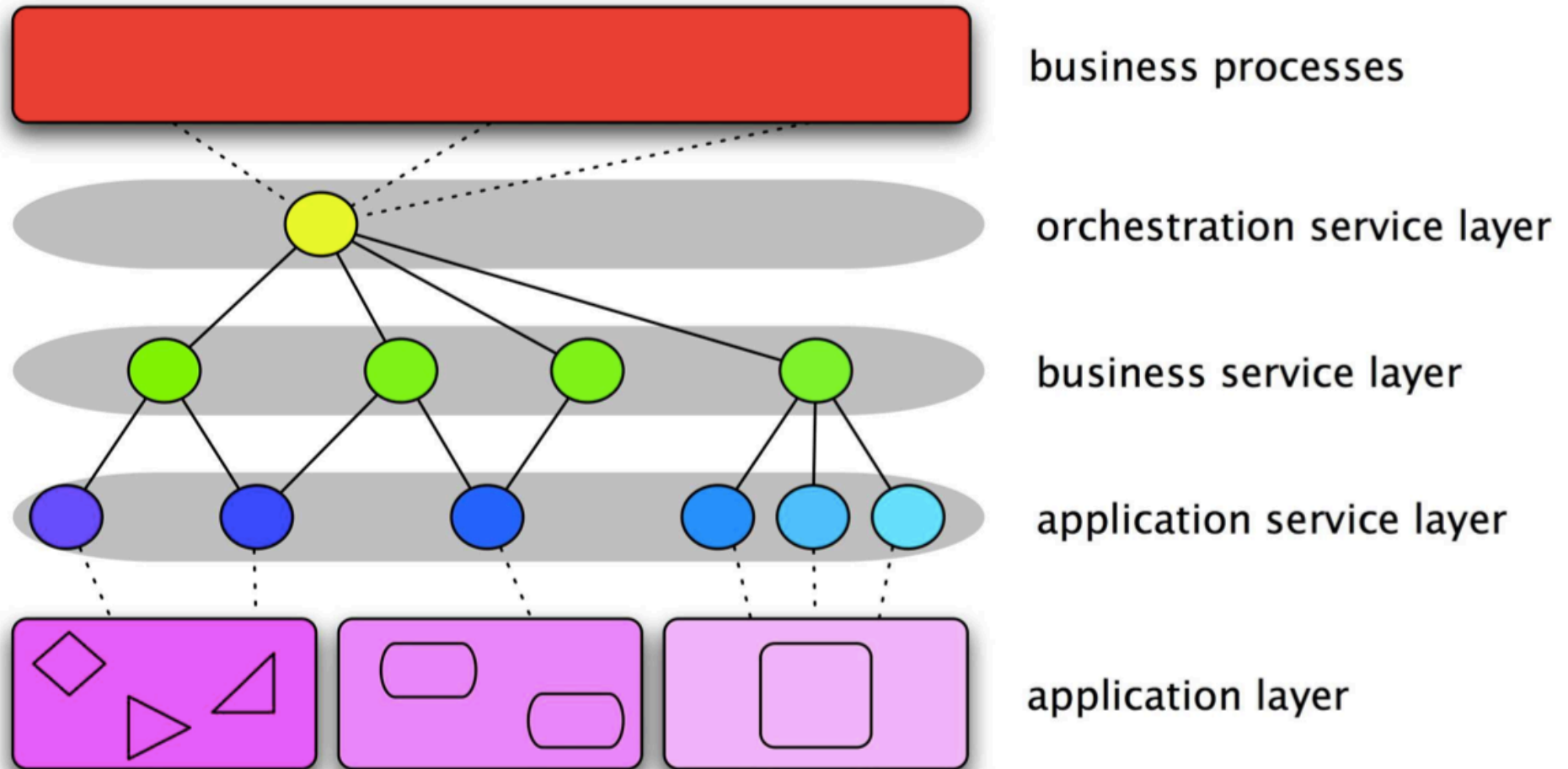
Oxford University
Software Engineering Programme
Dec 2012



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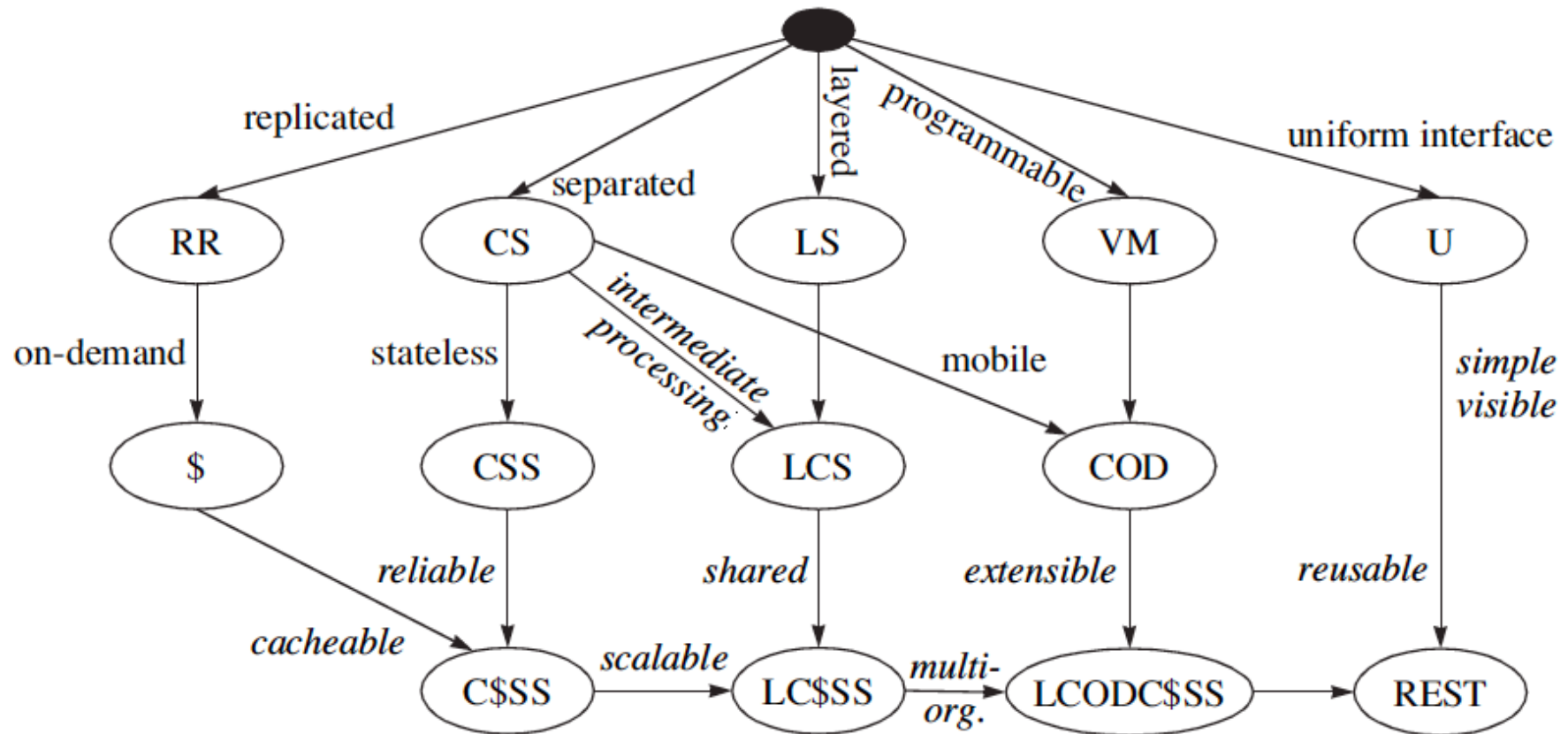


SOA



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REST



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HATEOAS

```
201 Created
Location: http://starbucks.example.org/order/1234
Content-Type: application/xml
Content-Length: ...

<order xmlns="http://starbucks.example.org/">
  <drink>latte</drink>
  <cost>3.00</cost>
  <next xmlns="http://example.org/state-machine"
    rel="http://starbucks.example.org/payment"
    uri="https://starbucks.example.com/payment/order/1234"
    type="application/xml"/>
</order>
```



SOAP and WS-*

- Composable
 - WS-Security, ReliableMessaging, etc
- Transport independent
- Tooling
- Schemas and WSDLs
 - Governance



SOAP vs REST?



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Design Governance

- Interfacing SOA into the build/test/production
- Encouraging Service Re-Use
- Lifecycle and Dependency Management
- Notification



Runtime Governance

- Monitoring
- SLA management
- Correlation of activities into flows



Services vs APIs

- Focus on the consumer
 - Self-signup and subscription
 - Tracking and usage
 - Developer portals and ease-of-use
 - Monetization



ESBs and Intermediaries

- ESB Patterns
 - Façade
 - Hub
 - Federated
 - Monitoring point
 - Transformation
- ESB vs Registry or both?



Orchestration and Composition

- BPMN, BPEL
- Executable Documentation?
- Visibility and Monitoring



Design Considerations

- Granularity of Services
- Ensuring that SOA is being used for a good reason:
 - Scale
 - Organizational boundaries
 - Evolvability
- Where to draw the boundaries?
 - Between services
 - Between ESB and BPM
 - Between organizations
- Are your layers right?



Organizational issues

- Funding models
- Fiefdoms
- Ecosystems / Value Webs
- Shadow IT / Cloud



SOA and Cloud

- SOA is loose-coupling between applications and applications
- Cloud is loose-coupling between applications and infrastructure



What else?



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Thanks!

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