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WS-Resource Framework: Globus Alliance Perspectives

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Perspectives

- ◆ Why is WSRF important?
- ◆ How does WSRF relate to the Open Grid Services Infrastructure (OGSI)?
- ◆ How does WSRF relate to the Open Grid Services Architecture (OGSA)?
- ◆ What will the Globus Alliance do with WSRF?
- ◆ What does WSRF mean for Globus Toolkit users?



Context: Open Grid Services Architecture

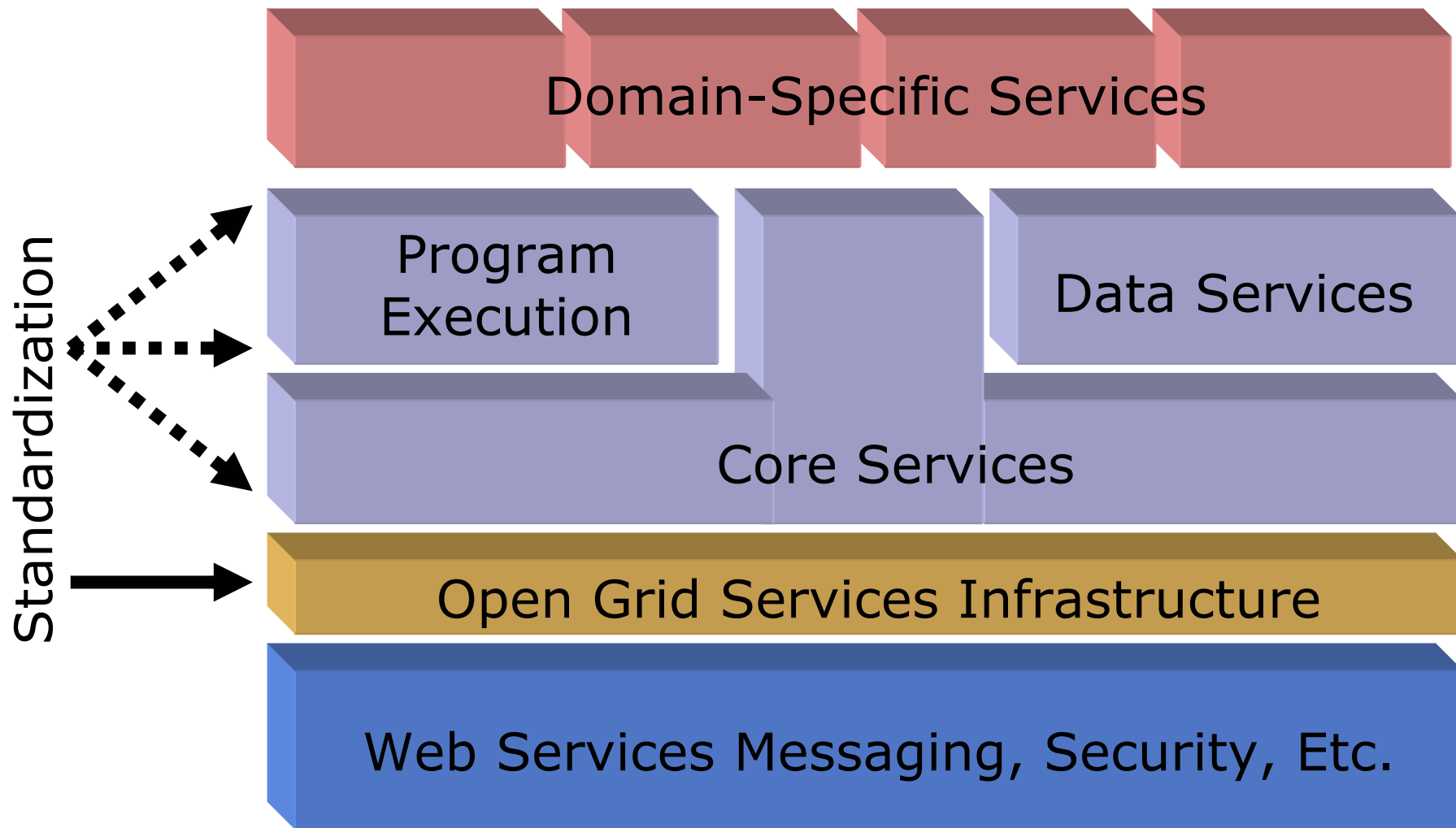
- ◆ Define a service-oriented architecture ...
 - ◇ the key to effective virtualization
- ◆ ... to address vital "Grid" requirements
 - ◇ AKA utility, on-demand, system management, collaborative computing
- ◆ ... building on Web services standards
 - ◇ extending those standards where needed



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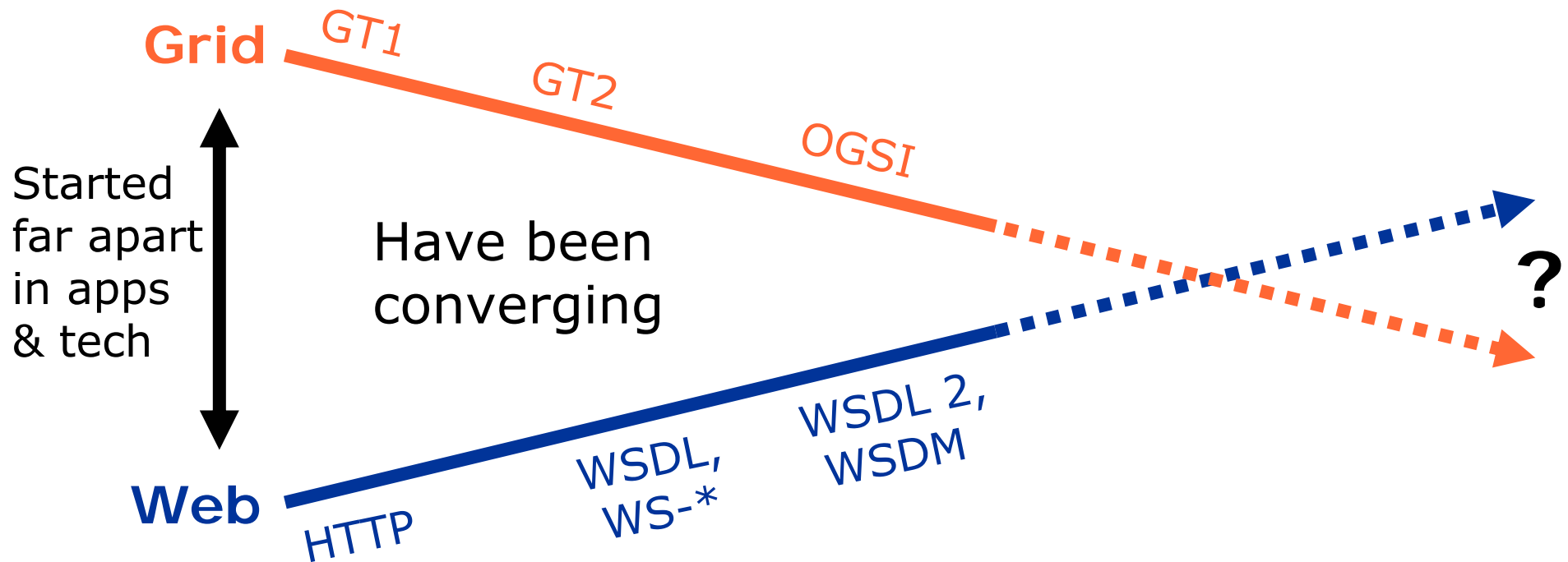
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Open Grid Services Architecture (www.ggf.org/ogsa-wg)





Grid and Web Services: Convergence?



However, despite enthusiasm for OGSI, adoption within Web community turned out to be problematic



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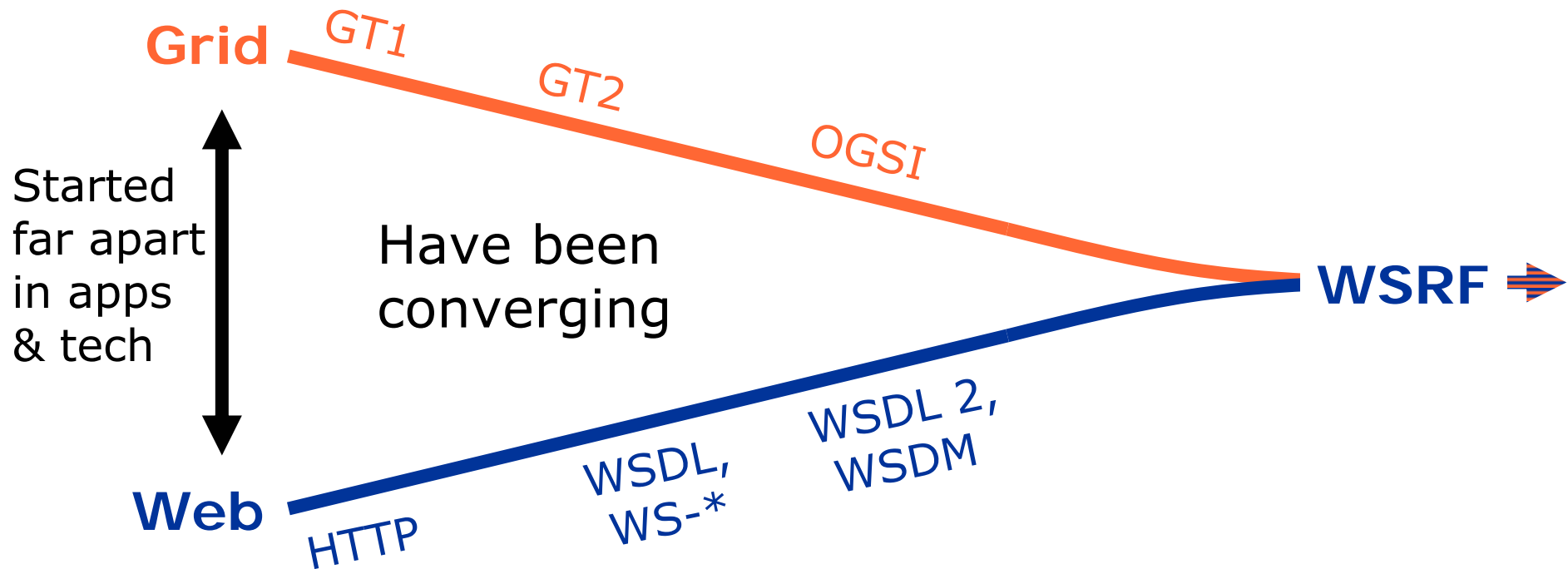
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Three Major Web Services Concerns about OGSI

- ◆ Too much stuff in one specification
- ◆ Does not work well with existing Web services tooling
- ◆ Too “object oriented”



Grid and Web Services: Convergence: Yes!



The definition of WSRF means that Grid and Web communities can move forward on a common base



Concerns Addressed

- ◆ Too much stuff in one specification
 - WSRF partitions OGSI v1.0 functionality into a family of composable specifications
- ◆ Does not work well with existing Web services tooling
 - WSRF tones down the usage of XML Schema
- ◆ Too object oriented
 - WSRF makes an explicit distinction between the "service" and the stateful "resources" acted upon by that service



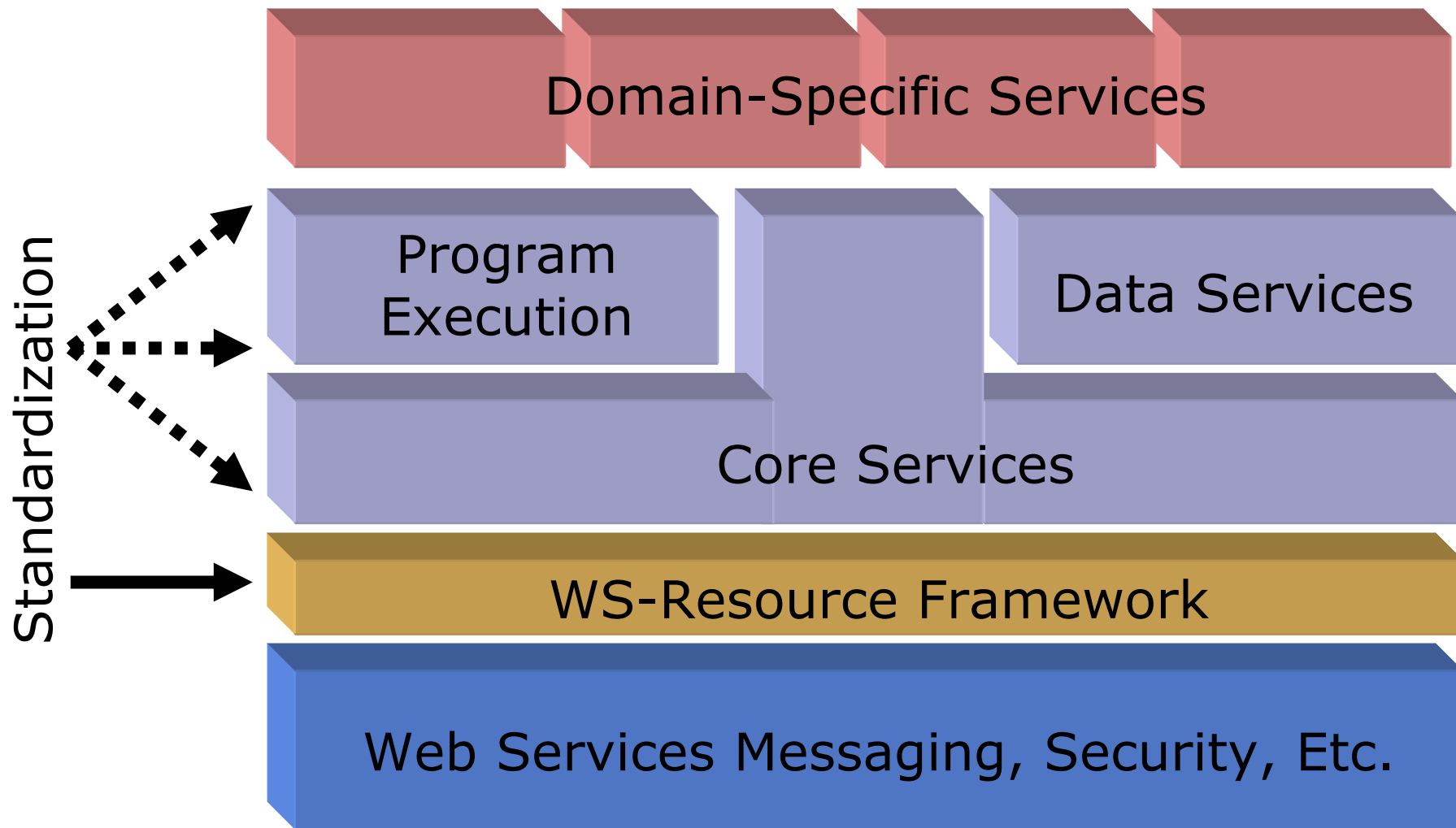
From OGSI to WSRF: Refactoring and Evolution**

OGSI	WSRF
Grid Service Reference	<i>WS-Addressing</i> Endpoint Reference
Grid Service Handle	<i>WS-Addressing</i> Endpoint Reference
HandleResolver portType	WS-RenewableReferences
Service data defn & access	WS-ResourceProperties
GridService lifetime mgmt	WS-ResourceLifeCycle
Notification portTypes	WS-Notification
Factory portType	Treated as a pattern
ServiceGroup portTypes	WS-ServiceGroup
Base fault type	WS-BaseFaults

**Draft document at www.globus.org/wsrf this week



Open Grid Services Architecture

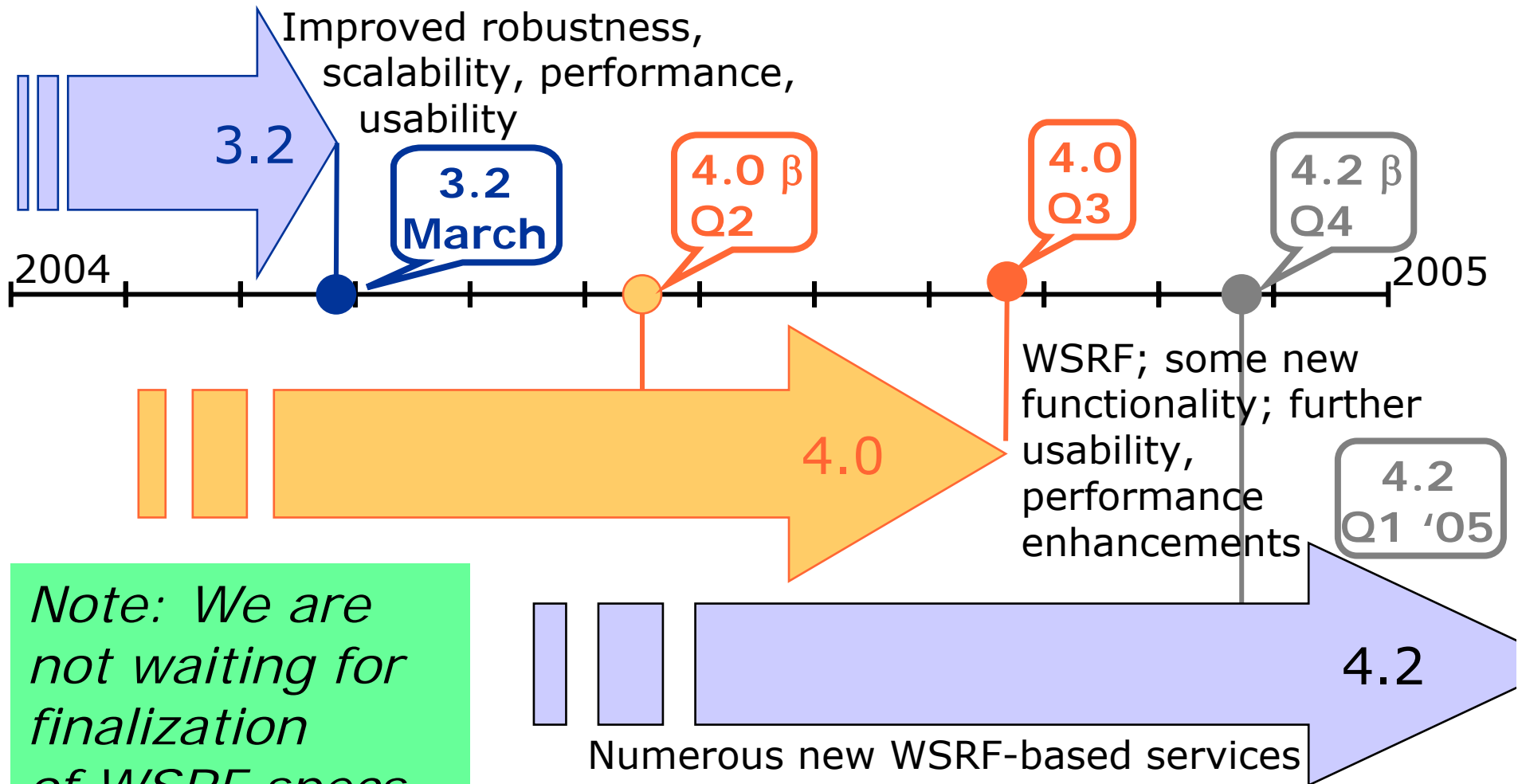




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Globus Toolkit® and WS-Resource Framework



Note: We are not waiting for finalization of WSRF specs



Implications for the Globus Community

- ◆ Production deployments based on GT pre-OGSI components
 - ◇ These components will be included in 3.2 and 4.x, and we will continue to support you
- ◆ Projects based on GT OGSI components
 - ◇ Changes are regretted but promise ubiquity
 - ◇ We will work to ease transition to WSRF
 - ◇ Similarities between OGSI and WSRF imply that most changes will be straightforward



Summary

- ◆ Why is WSRF important?
 - ◇ WSRF completes Grid/Web convergence
- ◆ How does WSRF relate to OGSI?
 - ◇ WSRF restates OGSI concepts in WS terms
- ◆ How does WSRF relate to OGSA?
 - ◇ WSRF mechanisms will enable OGSA
- ◆ What will Globus Alliance do with WSRF?
 - ◇ WSRF-based GT4.0 planned for Q3 2004
- ◆ What does WSRF mean for GT3.0 users?
 - ◇ For the most only minor changes



For More Information

- ◆ Specifications, architecture documents, FAQ, and other information
 - ◇ <http://www.globus.org/wsrp>
- ◆ Discussion forum
 - ◇ <http://www.ggf.org/ogsi-wg>
- ◆ GlobusWORLD Sessions
 - ◇ Tuesday, 10:30a: Panel
 - ◇ Wednesday, 4:30p: WSRF Technical Details
 - ◇ Thursday, 10:30a: Meet the WSRF Authors