A steel semi-submersible floating foundation design

Steel Floating Substructures – Sept. 18 - Edinburgh

Barend Jenje – Commercial Director Floating Wind

Three main foundation arche types.

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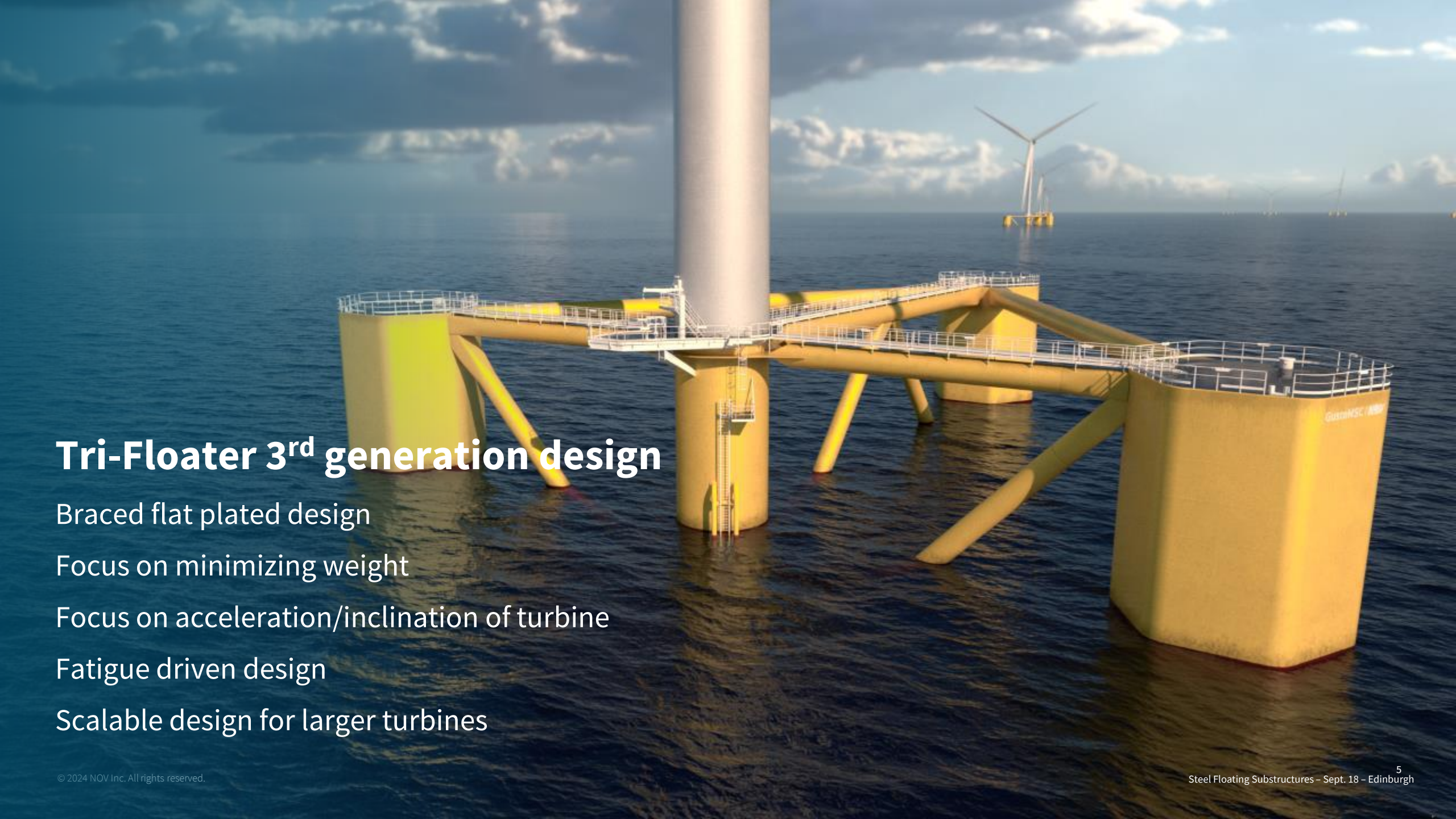
The Tri-Floater technology is making use of the combined experience of over 40 years experience in steel semi-submersibles for the oil & gas sector and 30 years of offshore wind industry.




Tri-Floater – Design history



Tri-Floater 3rd generation design

Braced flat plated design

Focus on minimizing weight

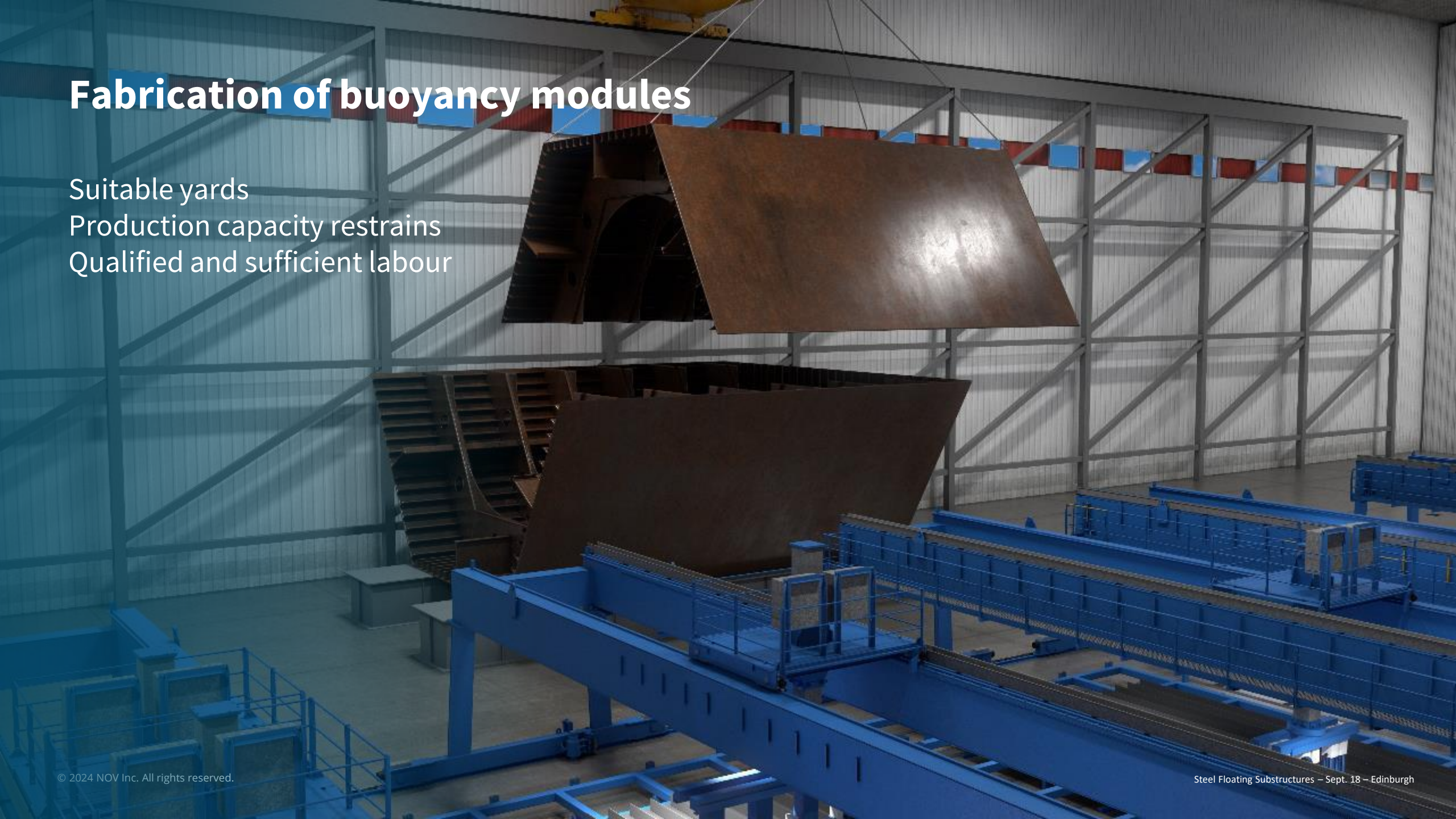
Focus on acceleration/inclination of turbine

Fatigue driven design

Scalable design for larger turbines

Fabrication of buoyancy modules

Suitable yards
Production capacity restrains
Qualified and sufficient labour



Design for manufacturing (industrialization) and low steel weight

Modular fabrication

Main buoyancy blocks all similar
Bracings at industry standard
Transition piece similar to current fixed wind solutions

Why not cylindrical/tubular design?

Large diameter pipe joints/nodes are labor and quality intensive welding process.

Foundation Assembly

Available locations close to project
Depth at quayside
Qualified and sufficient labour

Semi-submersible turbine installation

In port/harbor

With potential to be grounded to seabed

Semi-submersible foundation installation

Wet storage

Weather window for installation

Dynamic cable

O&M access

Looks and feel similar to fixed offshore wind

GustoMSC|NOV Tri-Floater

Proven semi-submersible technology
Validated technology by scaled model tests
Low acceleration levels
Efficient manufacturing, installation and O&M
Potential for industrialization
Technology ready for full scale deployment

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Thank you!