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Definitions

V-280 Valor is the Bell Naming Convention for 3\textsuperscript{rd} Gen Tiltrotor Effort

JMR – Joint Multi-Role
- BAA
- MPS

Science & Technology (S&T)
- MPS: Model Performance Specification
- AVCD: Air Vehicle Concept Demonstrator

FVL – Future Vertical Lift
- Program of Record (PoR)
- JMR – Joint Multi-Role
- FVL – Future Vertical Lift

THE FUTURE OF VERTICAL LIFT

JMR TD REDUCES RISK FOR FVL
Team Valor

- A team of industry leaders to deliver the highest technological solution while reducing risk.
- Teammates bring the engineering resources, capabilities, and critical thinking to advance the design and technology maturation.

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Team Valor

Developing Industry Leading Teammates Worldwide

Mission System Architecture and Mission Equipment Packages
Flight Control System Engine Support
Elastomerics
Hydraulics
Nacelles

V-Tail
Fuselage
Electrical
Fuel
Training & Sim

THE FUTURE OF VERTICAL LIFT
Voice of the Customer

- Speed, Range, Payload, Reliability, and Survivability
- Affordability
- Hover Maneuverability
- High Hot Operations
- Sustainability
- Commonality

Bell’s Technology Demonstrator to Address These Capabilities
JMR Tech Demonstrator

- Superior Low-Speed Maneuverability
- Advanced Rotor and Drive System
- Non-Rotating Fixed Engines
- Low Disk Loading
- 2 Pilots / 2 Crew Chiefs
- Fly-By-Wire
- Conventional Retractable Landing Gear
- Large Side Door
- 11 Passengers

HELICOPTER MODE

THE FUTURE OF VERTICAL LIFT
JMR Tech Demonstrator

Cruises at 280 knots

Large Cell Carbon Core Wing

Turboprop-like Ride Quality

Superior High-Speed Handling Qualities

Advanced Composite Fuselage

FORWARD FLIGHT MODE
V-280 Wing Design for Mfg

Affordability Characteristics

- Semi-Monocoque design (large cell carbon core)
- No skin stiffening details/ fasteners
- Straight wing (few splice details)
- Broad goods lay up with reduced pad ups
- Bonded continuous skin assemblies
- Minimal ply drops
- Bonded LCCC rib assembly
- Toolled interfaces – reduced shimming
- Determinate assembly
- Point of use material dispensing
- Minimal compactions

REDUCED COMPLEXITY, LESS PARTS, LOWER COST
Scaled AVCD Demonstrator Mission
Crew: 4
Payload: 11 passengers

229 nm mission radius
MPS & Variants

MPS Updates

Marinized

Attack Variant

Medevac Variant
Attack Configuration

Common Airframe to Utility
30 mm nose gun

Internal Weapons Bays
- Fwd Bay – Fwd Firing, Deploys Outboard
- 2 Aft Bays - Lateral Firing
Comparable Footprint

THE FUTURE OF VERTICAL LIFT
Exceptional capability

- Speed, range, payload, survivability

Manageable technical risk

- 3rd Generation Tiltrotor
- Cost and performance improvements

Total ownership cost

- Unprecedented fuel efficiency
- Greatest operational productivity
- Proven commonality with variants

THE NEXT GENERATION OF VERTICAL LIFT: TWICE AS FAST, TWICE AS FAR