



# World-Net Virtual Collaborative Architecture Product Plan Briefing

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# *Purpose*

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Introducing World-Net, a 3D Virtual  
Architecture That will Transform Collaboration  
Across Government and Business

# *Agenda*

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- . Bottom Line Up Front (BLUF)
- . The Government/Business Collaborative Challenge
- . Current Solution Limitations
- . The World-Net Solution
- . World-Net Conceptual Approach
- . World-Net Competitive Advantages
- . Operational Plan and Milestones
- . Revenue Model(s)

# *Bottom Line Up Front*

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World-Net will effectively transform government and business collaboration over distance by providing users with 24/7/365 browser-based access to an open, 'parallel world' virtual architecture, complete with in-app collaborative tools and user-generated linking to external content and apps

# *The Government-Business Collaborative Challenge*

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- Resources Available for Traditional Collaboration in the Federal Government and its Commercial Partners have decreased by over 30% since 2011
- Collaborative Requirements have remained steady or Have increased During the Same Period
- Currently Available Virtual Collaborative Technologies are Wholly Inadequate to Meet Increased Demand

# *Current Solution Limitations*

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## Government Use of VTCs and DCO Connect is Inadequate to Meet the Needs of the Federal Community

### VTCs:

- Limited Availability at Point of Need

- Non-Persistent – no ad-hoc collaborative capability

- Limited Data Sharing

### DCO Connect

- Non-Persistent

- Very Limited Capacity – max 8,000 Simultaneous

- Users for a 2.3M DoD Community

- Non-Intuitive – Generally Disliked by the User Community

- Limited to DoD Personnel and Selected Contract Personnel

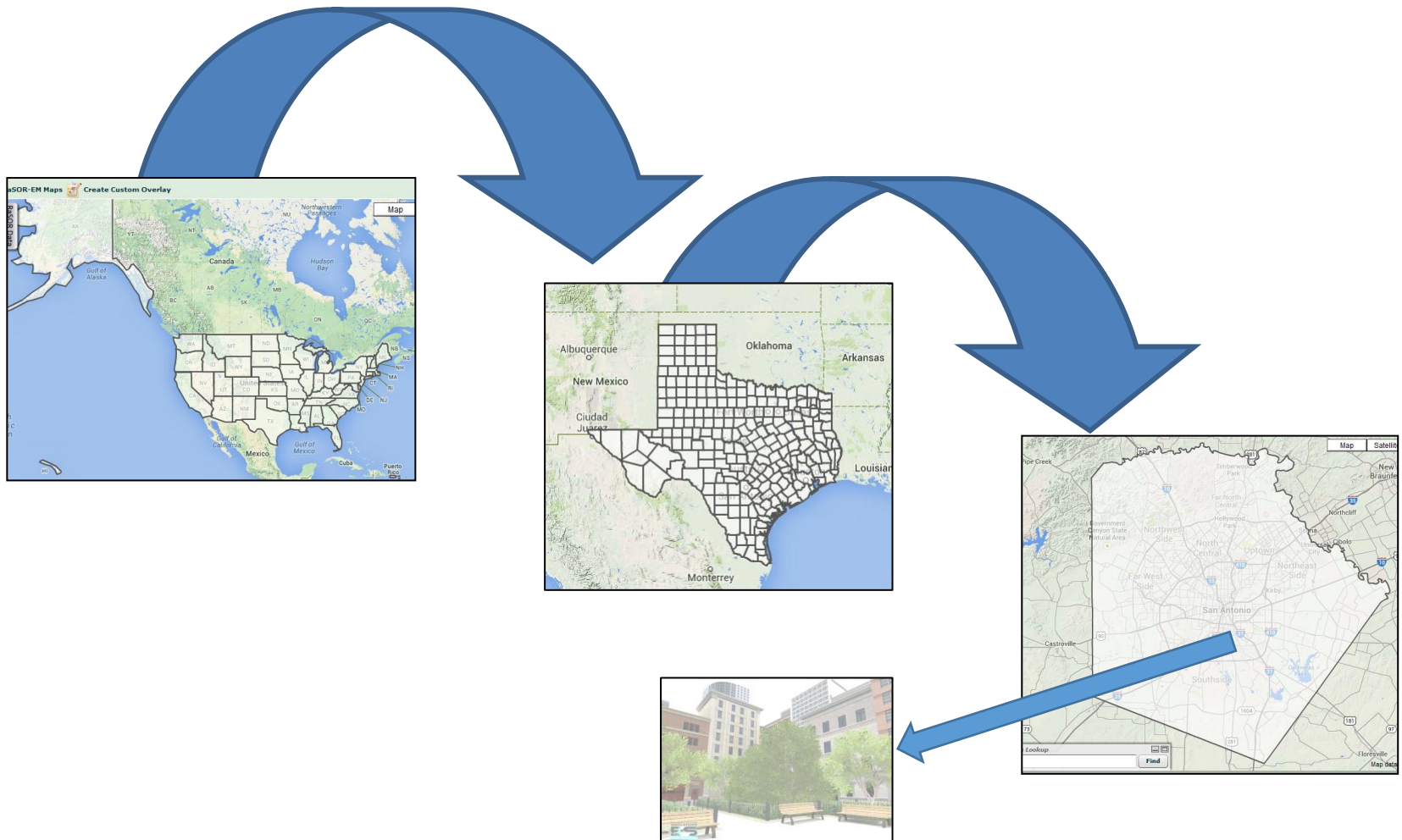
# *The World-Net Solution*

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- Revolutionary Parallel World Architecture
- Unlimited Scaling (# Simultaneous Users)
- Unprecedented Immersion
- Accessible to Everyone, Everywhere, All the Time
- Robust Collaborative Toolset
- External Capability Linking
- Very Low Cost Per-User

# *World-Net Conceptual Approach*

## 1. Start with an Architecture that Parallels the Real World





# *World-Net Conceptual Approach*

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2. Make it Accessible to Anyone, From Anywhere, at Any Time
  - . Browser Based
  - . Platform Agnostic
  - . Intuitive Access
  - . Full Persistence
  - . Scaled Loading w Instancing

# *World-Net Conceptual Approach*

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## 3. Allow Users to Choose Appropriate, Professional Virtual Personas

- . Uniforms
- . Civilian Attire
- . Styles/Colors
- . Skin/hair/body proportions

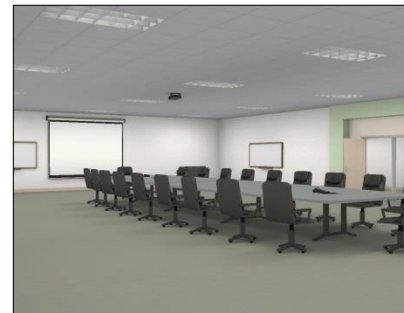


# *World-Net Conceptual Approach*

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## 4. Provide Them With an Intuitive 'Home' Environments and Collaborative Spaces

- Visual Interface for apps
- Visual Favorites
- Data Storage
- Individual or Small Group Collaboration



# *World-Net Conceptual Approach*

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## 5. Allow Them to The Collaborative Tools of Their Choice

- . World-Net Tools
- . Skype
- . DCO Connect
- . Facebook
- . Traditional VTC
- . Other

Note: Access to External Apps will always be subject to agency restrictions,  
Which is why World-Net Offers a Complete Collaborative Tool-Set

# *World-Net Competitive Advantages*

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- Access at the Point of Need! This should be a foregone Conclusion, But NOTHING meets this threshold at present (even DCO Connect)
- Access to Non-DoD Personnel. At present, Non-government personnel can't even connect with government clients unless they are already under contract
- Persistence and Ad-hoc Collaboration. Non persistent collaboration tools rule out all forms of ad hoc collaboration, which is often the most important collaborative form of all.
- Telework/Routine Presence. World-Net Offers the potential for users to Log-in and stay 'in world for extended periods

# *Why Hasn't This Been Done Before?*

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- Technological Hurdles – Bigger Pipes and New Technologies Make This Type of Capability Possible for the First Time
- Architectural Approach – Early Virtual Applications Thought in Terms of Environments. World-Net Builds Environments into an Architecture Everyone Can Understand
- Re-purposing Versus Build-Your-Own. Nearly all Early Virtual Worlds Were Fantasy/Alternative World Knock-offs. World-Net is Designed from the Ground up as a Real-World Collaborative Capability
- Focus – Many Early Efforts Tried to be Everything to Everyone. World-Net Focuses on G2G and B2G Collaboration. Nothing Fancy – Just an Always On, Accessible Tool for Getting Work Done Across Distance

# *Enabling Technologies – Key Issues*

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## **Teleplace**

- VOIP
- Text
- Whiteboard
- Data Sharing
- Data Storage
- PPT
- Etc.



Must be fully  
browser based

## **Adobe Flash 13**

- Plug-in Support for 3D Virtual Environments



- Must support appropriate interior (exterior) spaces
- Must support 30 avatars (negotiable)

# *Development Approach*

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- Use 3D Party Middleware When Appropriate (license?)
- DO NOT Attempt to Adapt Existing Retail Platforms (Many Reasons...)
- Use Agile for Capability Development and Traditional WBS for non-SW tasks
- Identify Minimum Capability Set Early and Prioritize Accordingly
- Integrate Testing Throughout the Development Process
- Minimum Capability Creep to Baseline
- No Use of Government Funds for Baseline Capability Set (Optional Features - Yes, Baseline - No)
- Robust Beta Test Period



# *Key Technological / Operational Challenges*

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- Loading: To Be Successful, World-Net Must Manage Large Numbers of Simultaneous Users in Selected Locations (Washington, D.C., New York, Los Angeles, etc.)
- Security: World-Net Must Balance Security with Access, Particularly wrt Government Users
- Server Efficiency: World-Net Must Efficiently Manage Deployment of Large Numbers of Virtual Environments (locations) to Ensure a Profitable Business Model

# Operational Plan and Milestones

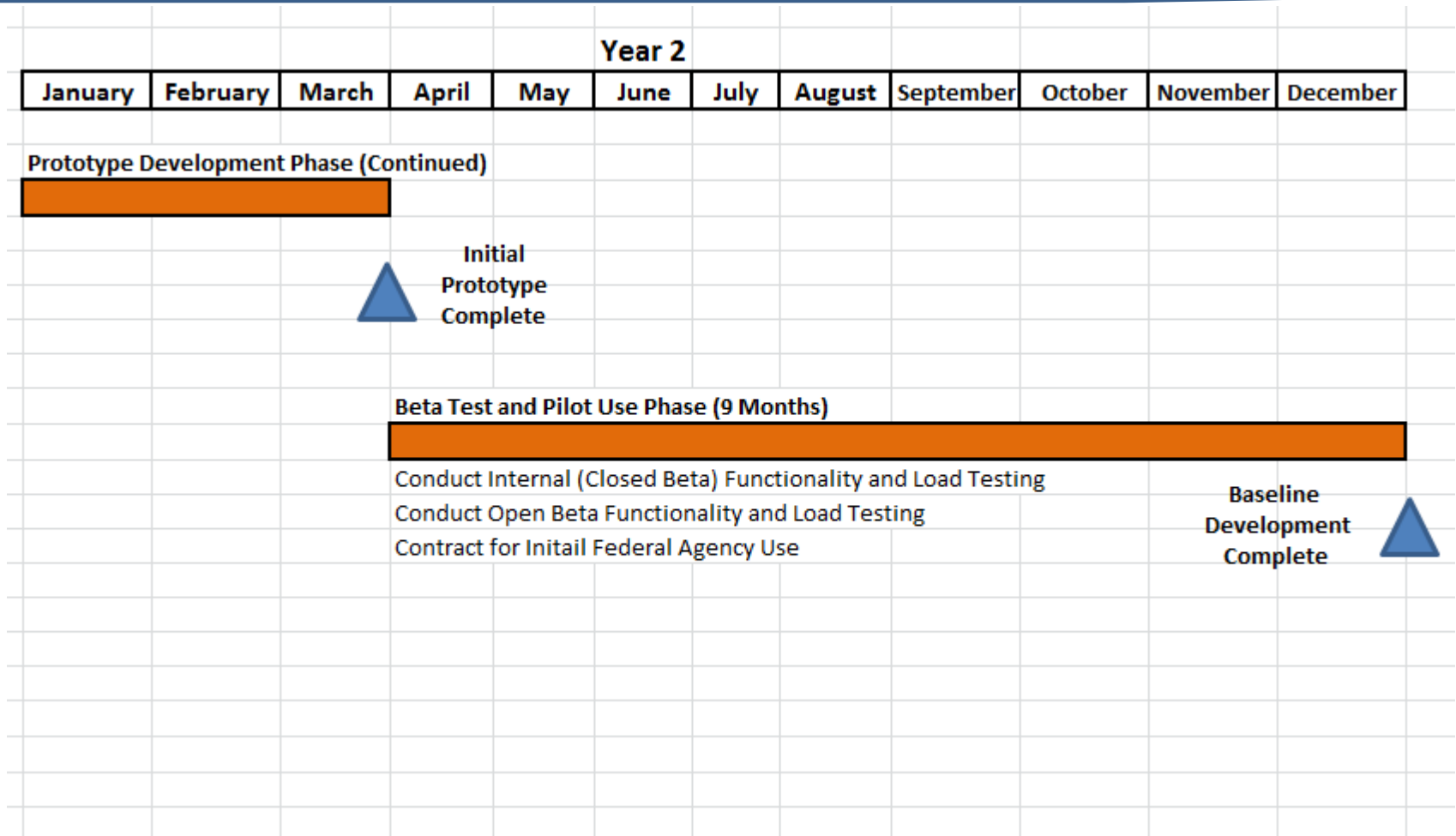
## Appendix E: Operational Milestones

Year 1											
January	February	March	April	May	June	July	August	September	October	November	December
<b>Admin Prep Phase (3 Months)</b>											
Implement HR Policies/Procedures											
Establish Consulting Relationships											
Establish Work-site											
Purchase Computer HW/SW											
Purchase Development Servers											
Purchase Licensed SW											
Install and Configure SW											
Configure Servers											
Hire Development Personnel											
Hire Personnel											
Establish Accounting Baseline											
Build Initial User Story Database											
Complete Initial User Story List											
Build Development Phase Sprints											
Finalize Initial Architecture											
Finalize Functional System Description											
Evaluate and Select SW Components											
<b>Prototype Development Phase (12 Months)</b>											
Development Sprint Execution											
Integrated Test Execution											
Initial Prototype Completion											
Continue User Story Build											
Develop and Maintain User Story Prioritization and Backlog											
Develop and Implement Federal Government Engagement Strategy											
Establish Marketing Campaign Strategy and Implementation											
Develop Beta Phase Test Plan											



Prep  
Complete

# Operational Plan and Milestones (Cont'd.)



## *Operational Plan and Milestones (Cont'd.)*

Year 3											
January	February	March	April	May	June	July	August	September	October	November	December
Operational Use											
Expanded Federal Agency Use											
Initial Commercial Use (DoD Contractor Organization)											
Open Use for Business/Individual Use											

# *World-Net Development/Deployment Imperatives*

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- . The Initial World-Net Architecture and tools will be limited to Those critical functions that can be fully developed and reliably deployed
- . User 'virtual persona's' (avatars) must conform as closely as possible to real-world appearance (with some exceptions)
- . Visitor access to the architecture must be uninhibited
- . The capability **MUST** be thoroughly tested and hardened prior to initial use
- . Capability updates will be extensive and long term, but must also be conservative (thorough testing required)

# *World-Net Competitive Advantages*

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- . It's Accessible. Previous Virtual worlds required client downloads, effectively precluding their widespread use across government
- . It meets a compelling government need. Reductions in government make use alternative collaborative tools an imperative. This identified need did not exist until 2011
- . It Provides a parallel architecture that facilitates movement and collaborative activities across vast 'distances'
- . It's familiar. The World-Net Architecture parallels the real world, providing user a critical sense of place in the virtual world.

# *World-Net Competitive Advantages*

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- It will use a unique modular concept that allows for real-time deployment of relevant virtual environments across the architecture, ensuring Maximum use of server resources
- It will be scalable. Use of Massive Multiplayer Online Gaming Instancing will allow scalable loading at any point/environment in the architecture
- It will open and customizable. Users will be able to use World-Net collaborative tools or establish links to external content and apps
- It uses a multi-faceted revenue model. Revenue models will be tailored to Government, business and personal use
- Anyone can visit. Visitors to World-Net can establish temporary accounts free, ensuring access to collaborative activities.