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Agenda



- Who we are (VA Fly's)
- Our IT Philosophy
 - Governance
- Data Center Build
 - Environmental Positives!
- The Infrastructure
 - Our Open Source World
- What we run
- Our MATRIXED WORLD!
- VA Kiosk and eCommerce
- The Partners (a key to our success)
- Be a Guest on Virgin America



VA Fly's! – August 8, 2007



VA IT Philosophy



➤ Governance Process

- Business Groups drive requirements
- IT recommends solution analysis (what is available to meet business problem)
- Business Owner and IT Executive partner to obtain funding
- Team proceeds to build solution

➤ IT Solutions Process

- Requirements from business group drive focus
- Free Open Source Solutions (FOSS) – is there a solution here?
- Off the Shelf
- ASP Solution
- Costs to implement and maintain
- Headcount effect

Data Center Build out



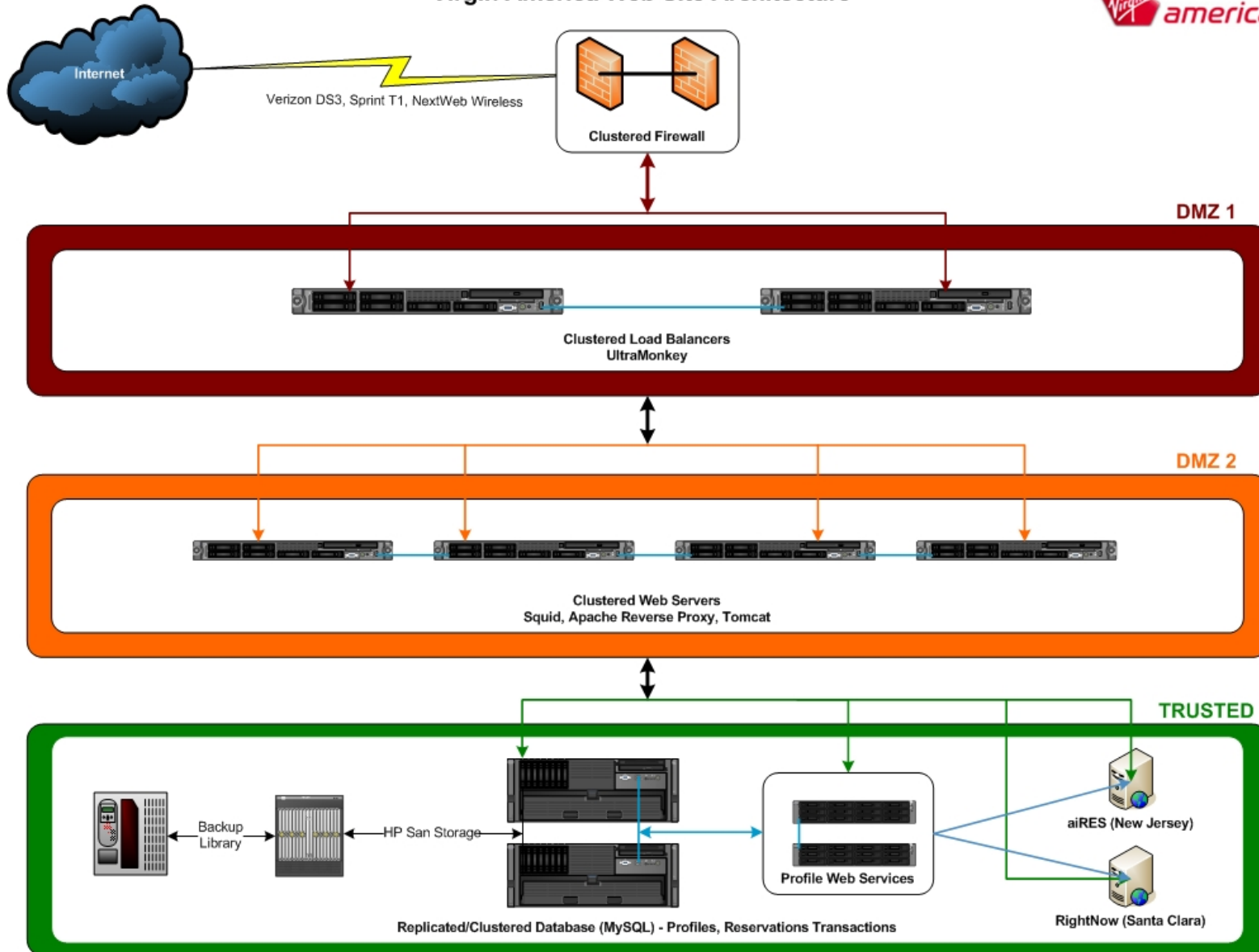
- **NO RAISED FLOOR!**
 - Latest Recommendations for (Green) Datacenter Designs
 - Overhead structured Wiring
 - Water Chilled Cooling
 - Intelligent transfer Switch
 - Environmentally efficient servers and racks
 - UPS
 - Generator that is environment friendly
 - What does this result in?

- **LOWER ELECTRIC BILLS! (BY APPROXIMATELY 28%)**

The Infrastructure



Virgin America Web Site Architecture

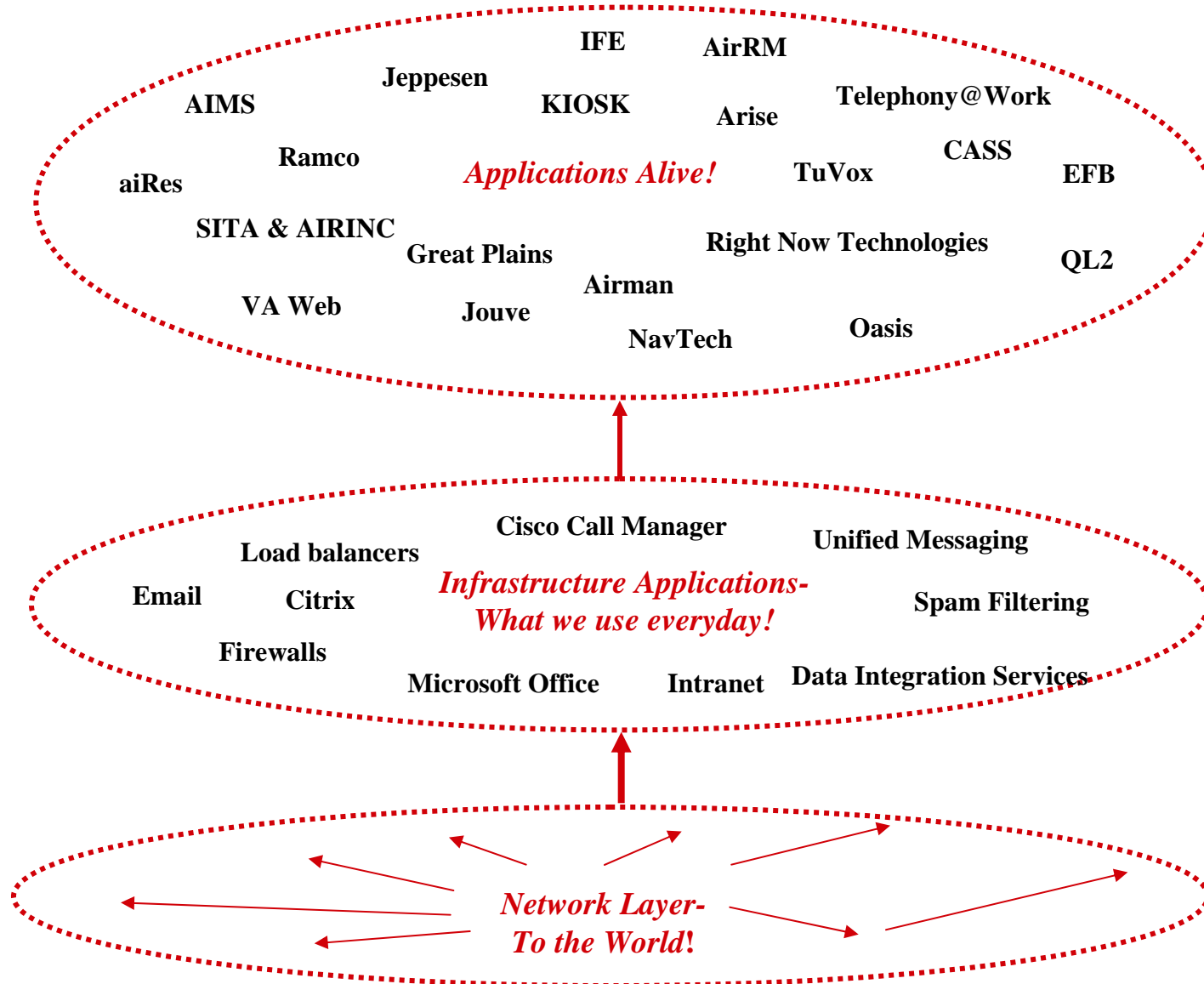


FOSS in VA

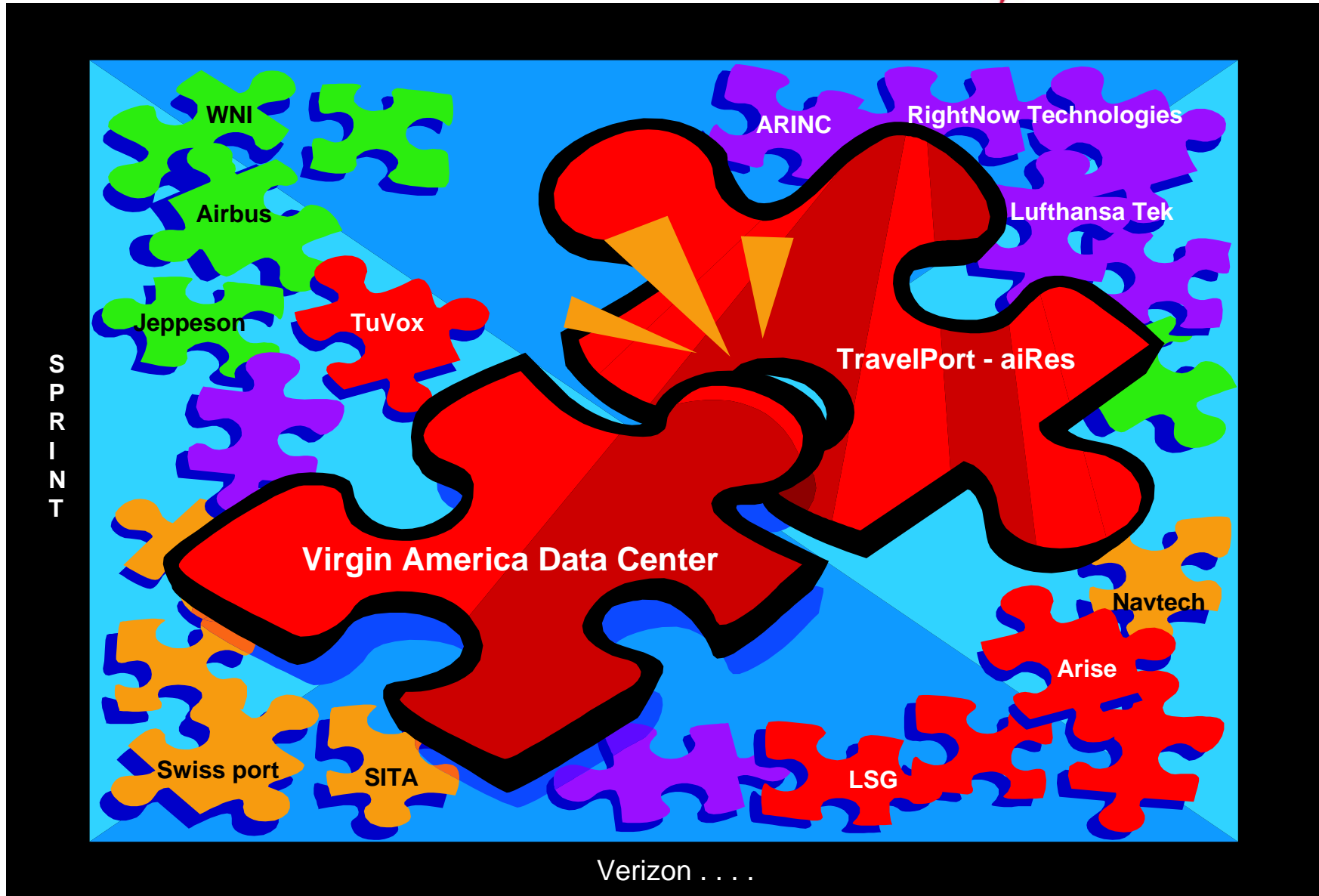


- **IPTables**
- **Ultra Monkey**
- **Linux Virtual Server**
- **Apache**
- **Kerberos**
- **Free Radius**
- **Bind**
- **Open VPN**
- **WhatsUp**
- **Perl**
- **MySQL**
- **Pentaho Kettle**
- **Squid**
- **Tomcat**
- **Scarab**
- **Knowledge Tree**
- **Cacti**
- **Postfix**
- **Clamav, amavisd-new, spamassassin**
- **Main Mailguard**

VA INFRASTRUCTURE – What we run!



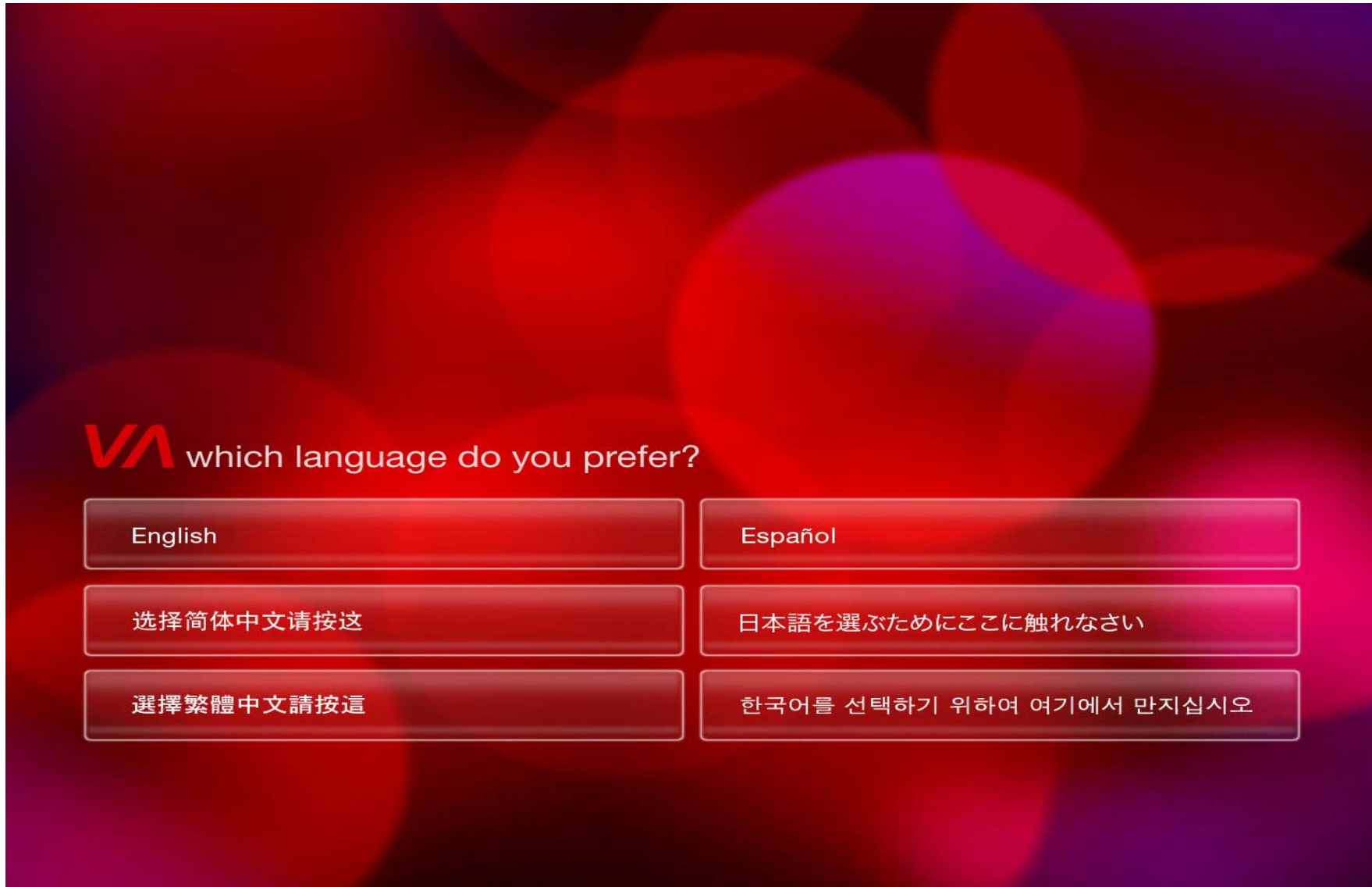
The PUZZLE!



VA Airport Technology - Kiosk



Kiosk – Are you ready to check-in?



VA eCommerce Site



➤ Core Architecture

- Total cost \$700K (95 % development \$0 Cost for operating software)
 - Typical eCommerce site cost - \$ 3.5M to \$5M
- Current site can process 9 million transactions per day
 - This will be sufficient for the first 2 years
 - Can be scaled horizontally, to add millions more transactions per day
 - Load tested using industry standard load testing tools (Loadrunner)
 - Load Balancer solution tested to 633,318 transactions per second
 - The only airline website that can return 7 days worth of flights in under 3 seconds
- Will evolve to geographically dispersed site that will be hosted out of multiple low-cost locations in the US

➤ Profile Services

- What these are and why they are important
- What we can do with this information
 - CRM
 - Key for eleVAte

VA Partners (Helping our Success)



- **NIIT**
- **Verizon**
- **Sprint**
- **Jeppeson**
- **Arise**
- **TuVox**
- **WNI (Weather)**
- **Swiss port**
- **TravelPort**
- **LSG (Food Service)**
- **Lufthansa Technik**
- **RigthNow Technologies**
- **Menizes**
- **Airbus**
- **SITA**
- **ARINC**
- **NavTech**

Flying VA – the Encounter



Be a guest of Virgin America!

