## Agenda

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributed Operating Model</td>
<td>Anthony Morose</td>
</tr>
<tr>
<td>Global Migration Protocol</td>
<td>Ralph Block, Brian Gauvain</td>
</tr>
<tr>
<td>Case Study: Financial Reporting</td>
<td>Gary Casagrande, Brian Gauvain</td>
</tr>
</tbody>
</table>
DISTRIBUTED OPERATING MODEL
Why a Standardized, Distributed Operating Model

<table>
<thead>
<tr>
<th>Challenges to be Addressed</th>
<th>Objectives of a Standardized, Distributed Operating Model</th>
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<tbody>
<tr>
<td><strong>Multiple operating models</strong></td>
<td><strong>Single Operating Model</strong></td>
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<tr>
<td>- Non standard local operating models</td>
<td>- Implement single global standard operating model</td>
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<tr>
<td>- Technology built around single-site solutions</td>
<td>- Consistent technology tools applied across locations</td>
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<tr>
<td>- Multiple costly platforms</td>
<td>- Re-engineer and reequip workforce, staff focusing on the areas of their expertise</td>
</tr>
<tr>
<td>- Difficult to leverage</td>
<td>- <strong>Client Delivery</strong></td>
</tr>
<tr>
<td>- Highly trained staff performing end to end process, including repetitive tasks</td>
<td>- Implement component based architecture to meet clients’ increasingly complex demands</td>
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<tr>
<td><strong>Client Delivery</strong></td>
<td>- Distributed operating staff supports 24hr clock – follow the sun model</td>
</tr>
<tr>
<td>- Flexibility for clients to pick and choose mix of services</td>
<td><strong>Risk Management &amp; Control</strong></td>
</tr>
<tr>
<td>- Global support difficult with inconsistent technology and processes</td>
<td>- Centers of expertise promote development of best practices and control</td>
</tr>
<tr>
<td><strong>Risk Management &amp; Control</strong></td>
<td>- Distributed standardized operating model facilitates risk management and cross region recovery</td>
</tr>
<tr>
<td>- Lack of critical mass around functions at individual locations</td>
<td><strong>Client Delivery</strong></td>
</tr>
<tr>
<td>- Risk management and controls vary based on local technology and processes</td>
<td><strong>Risk Management &amp; Control</strong></td>
</tr>
<tr>
<td>- Business resiliency relying on local solutions</td>
<td>- Centers of expertise promote development of best practices and control</td>
</tr>
<tr>
<td></td>
<td>- Distributed standardized operating model facilitates risk management and cross region recovery</td>
</tr>
</tbody>
</table>
A Global Operations Presence

USA – Dallas, Boston, Delaware, Cincinnati, New York, & Greenwich
- Fund Services
- Custody
- Securities Lending
- Hedge Fund Services
- Derivatives Operations
- Account Opening
- Entitlements
- Billing
- Collateral Management & US Clearance

Luxembourg
- Fund Services
- Fund of Fund Support

India: Mumbai & Bangalore
- Fund Services
- Custody
- Sub-Custody
- Entitlements
- Clearance and Collateral Management

Philippines - Manila
- Fund Services
- Billing

UK – Bournemouth, London, Edinburgh, & Swindon
- Fund Services
- Custody
- Securities Lending
- Hedge Fund Services
- Investment Operations
- Derivatives Operations
- Account Opening
- Clearance & Collateral Management

South Africa – Cape Town
- Fund Services
- Investment Operations

Australia - Sydney
- Fund Services
- Sub-Custody
- Securities Lending
Common Distributed Operating Model – Client Touch Points

- Single Governance and Control team to provide end to end support
- Client Touch-points with Local Client Centers at:
  - Transaction Capture (Investment Operations Support)
  - Accounting, Administration & Tax Validation and Release
  - Regional & Global Support for 20 hr servicing – Follow the Sun
GLOBAL MIGRATION PROTOCOL
Migrations: Integrated Governance Framework

**Migrations**
- Robust Transition Governance through ATC model
- Structured reviews at Pre and Post migration stages
- Focus on Quality Assurance, Documentation and Training

**Operations and Technology**
- Business Performance Review
- Management Reporting and Analytics
- Project Management and Governance
- Audit Management and Governance

**Legal / Compliance / Risk**
- Advising business on
  - Regulations
  - Policies and standards
  - Applicable Laws
  - Compliance training

**BCP / Resiliency**
- Site Incidence / Crisis management
- Co-ordinate and conduct Strategic Resiliency tests
- MBM Resiliency model and Load Balancing
Migration Planning

**Transition Governance**

- A centralized body (Air Traffic Control – ATC) across all locations and lines of business reviews and approves each migration.
- Each migration follows a standard project plan template which is then customized based on length of training and travel plans.
- Dedicated Project team and business lead are assigned to each migration at each site.

**Structured Reviews**

- Weekly meetings are held with stakeholders in donor and receptor locations to provide senior management updates.
- A standard formal list of documentation is gathered for each migration.
- Each migration Go Live is approved by the Managing Director and Executive Directors of the impacted lines of business.

**Quality Assurance/Training**

- All project changes require formal Change Control Request submission and senior management sign off.
- Training is done in the donor location with the receptor team traveling to Boston, and the receptor site with Boston sending subject matter experts to the receptor site.
ATC Documentation

**Project Charter**

- Defines project scope, objectives, project impact including legal entities involved and client impacts, high level time lines, and detailed project team list

**Project Framework Document**

- Defines any conditions or requirements given at the project charter approval and their resolution
- Confirms any regulatory body requirements (if any) are met
- Defines plans and impacts around the following areas:
  - Human Resources
  - Technology
  - Operational Risk
  - Business Continuity Management
  - Corporate Real Estate and General Services
  - Corporate Communications
  - Audit
ATC Documentation

**ATC Readiness Review Document**

- Confirms Go Live readiness across all impacted functions and stakeholders
  - Line of Business Management
  - Transition Management Team
  - Legal
  - Compliance
  - Finance and Tax
  - Operations Risk Management
  - Information Risk Management
  - Technology
  - Human Resources
  - Business Continuity
  - `Real Estate Business Services`

- Contains Readiness Review Sign Off Matrix for stakeholders
Governance Structure

Existing Metrics and Controls

- Daily, weekly, monthly, quarterly management reviews of key performance indicators
- Operations Scorecard
  - Financials
  - Stock record breaks, cash breaks, asset breaks, NAV timeliness
- SAS 70 reviews as required on annual basis
- Control Self Assessments updated monthly
- Monthly production stability reviews

Distributed Operating Model

- Daily checklist documented by Global/Regional/Local sites and reviewed/approved by donor site.
- Clear handover procedures agreed and SLAs put in place
- Workflow, business activity monitoring tool in place to allow intra-day tracking of all downstream/upstream activities and impacts
- Governance Hub team in place to monitor BAU end to end process, as well as identify and resolves cross functional issues and gaps
CASE STUDY: FINANCIAL REPORTING MIGRATION BOSTON TO MUMBAI
# Financial Reporting Migration Timeline/Lifecycle

<table>
<thead>
<tr>
<th>Task / Milestone</th>
<th>Date</th>
<th>Duration</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dec</td>
<td>Jan</td>
</tr>
<tr>
<td><strong>Project Start Date</strong></td>
<td>1-Dec</td>
<td>N/A</td>
<td></td>
<td>2009</td>
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<tr>
<td><strong>New Hire Date</strong></td>
<td>15-Dec</td>
<td>N/A</td>
<td>2009</td>
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<tr>
<td><strong>Announcement Date</strong></td>
<td>2-Jan</td>
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<tr>
<td><strong>Documentation</strong></td>
<td>5-Jan</td>
<td>20 Weeks</td>
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<tr>
<td><strong>TRAINING</strong></td>
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<td>21 Weeks</td>
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<td>2009</td>
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<tr>
<td><strong>Induction training</strong></td>
<td>5-Jan</td>
<td>2 Weeks</td>
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<tr>
<td><strong>Training Donor</strong></td>
<td>19-Jan</td>
<td>9 Weeks</td>
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<tr>
<td><strong>Training Receptor</strong></td>
<td>22-Mar</td>
<td>8 Weeks</td>
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<tr>
<td><strong>Model Office</strong></td>
<td>17-May</td>
<td>2 Weeks</td>
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<tr>
<td><strong>Go Live Date</strong></td>
<td>1-Jun</td>
<td>N/A</td>
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<td>2010</td>
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Financial Reporting Migration – Case Study

Project Scope/Start Date

- Phase 1 of J.P. Morgan’s migration into a functionalized model – Kicked off in July 2009
- Migrate a sufficient amount of Portfolio production to build sufficient scale on Day 1 (23 FTEs) to be able to maintain a consistent level of FTE usage each month with the anticipation of migrating virtually all Portfolio production on Day 2 (2011)

Announcement

- Announcement made to our clients via our client service teams
- Business team provided transparency into dates and functions being moved into the new model
- CCOs informed through the quarterly CCO Communication newsletter

Staffing Requirements (Mumbai)

- Mumbai staffed with 23 staff members – hired staff six months prior to migration (15 Team members, 5 Team Leaders, 3 managers)
- Boston business teams participated in writing job descriptions and active in the interview process
# Financial Reporting Migration Documentation

<table>
<thead>
<tr>
<th>Document</th>
<th>Donor Site</th>
<th>Receptor</th>
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<tbody>
<tr>
<td>Product Overview</td>
<td>a</td>
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<td>Air Traffic Control Documents</td>
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<tr>
<td>SOP</td>
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<td>a</td>
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<tr>
<td>OSA</td>
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<tr>
<td>Master Fund List</td>
<td>a</td>
<td>a</td>
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<tr>
<td>Org Chart</td>
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<td>a</td>
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<tr>
<td>BCP</td>
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<tr>
<td>Control Matrix</td>
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<td>Audit Schedule</td>
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<tr>
<td>Systems Escalation Grid</td>
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<td>Ops Team Escalation Grid</td>
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<tr>
<td>Checklist New Team</td>
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<tr>
<td>Checklist Legacy Team</td>
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<tr>
<td>Op Model (Future State/Current State)</td>
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<td>Scorecards</td>
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<tr>
<td>KRI, KPI</td>
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<tr>
<td>Business Impact Analysis</td>
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<tr>
<td>GTI Questionnaire</td>
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<td>Tech Questionnaire</td>
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<td>Training Schedule</td>
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<td>Competency Matrix</td>
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<tr>
<td>Pandemic Plan</td>
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<tr>
<td>UDT Matrix</td>
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Financial Reporting Migration – Case Study

**Training**

**Boston**
- January 19, 2010 virtual overview training began with Boston trainers training Mumbai remotely for 1 week
- February 1, 2010 Mumbai Core Team (Mgmt Team) arrived in Boston to begin 7 weeks of live Financial Reporting Training
- February 8, 2010 Mumbai Non-core Team arrived in Boston to begin 6 weeks of live Financial Reporting Training
- Boston trainers included VP overview, AVP client specific-overviews and hands-on preparer and reviewer training sessions

**Mumbai**
- March 22, 2010 9 Boston trainers traveled to Mumbai to begin on-site training for 11 weeks (9 weeks hands-on training / 2 weeks model office training)

  **Trainners:**
  - 1 VP
  - 1 AVP
  - 3 Assistant Treasurers
  - 1 Supervisor
  - 3 Staff Members
Model Office

- During the Financial Reporting Model Office in May 2010, Boston Financial Reporting Team remained in control of all Financial Reporting Activities; activities were broken out as detailed below. Boston trainers on site for Model Office.

  The Mumbai Financial Reporting Team:
  - Ran and saved supporting reports
  - Prepared portfolios
  - Prepared tables

  The Boston Financial Reporting Team:
  - Reviewed portfolios prepared by Mumbai Team
  - Reviewed tables prepared by Mumbai Team
  - Performed second level review

Daily scorecards were provided and ratings provided to the senior management team.
Financial Reporting Migration – Case Study

Operational Readiness Review

On June 1, 2010, all stakeholders approved the Financial Reporting migration to Mumbai.

Approval was evidenced by the Financial Reporting Operational Readiness checklist which included the following approvers:

- Business Lead/Functional Manager – Donor and Receptor
- Risk & Resiliency Manager – Donor and Receptor
- Program Manager
- Project Sponsor
- MD of Site – Donor and Receptor
- MD, Global LOB

Go Live

- On the morning of June 1, 2010, a meeting was held with the WSS Global Fund Services Operations Executive, Dan Kramer, where final approval was provided.

Post Go Live

- Global Hub Management – Functions being performed in Mumbai have been added to our oversight model. Metric, rating being provided to senior management and new business coordination being managed by the oversight team
- BCP Contingency Testing was performed on August 18, 2010