People, Processes, Technology: Why Can’t They All Get Along?

Alan Ramias
April 26, 2007
About PDL

Performance Design Lab (PDL)

• Research, consulting and training organization, founded by Dr. Geary Rummler

• Publishing History
  ➢ *BPTrends columnists*—Rummler & Ramias (2007)

• Our theory base and methodologies have been adopted as the standard for
  ➢ improvement initiatives within Fortune 100 companies,
  ➢ the consulting industry, “the consultant’s consultant”
  ➢ the curriculum of business schools.
The 3 Essential Capabilities

Process

People

Technology
• Speeds surpassing AMD’s latest
• Cheaper than sap
• Requires minimal programming
• Reconfigurable
• Can operate on multiple languages
• Infinitely fully implemented in 1-3 weeks
• Fuzzy-logic capable
• Self-upgrading, multitasking
• Operating lifespan up to 50 years barring excessive abuse
2 Topics

1. How to achieve alignment of business requirements to process, people and technology

2. How to identify and address potential obstacles to human performance enabled by technology
• Process = The Work

• People = The Performer

• Technology = The Enabler
  or
  The Performer
How to Achieve Alignment of P/P/T?

The Short Answer:

• The link between individual performance and organization results is the value-adding work linking the two.

• Follow the trail of WORK!
How? The More Complete Answer:

It starts with an alternative view of work-

The Anatomy of Performance (AOP) Lens
The Vacuum View
The Vacuum View

K/S

$
The Anatomy of Performance

The Human Performance System
The Anatomy of Performance
The Anatomy of Performance
The Anatomy of Performance
The Anatomy of Performance
The Anatomy of Performance
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RESOURCES
- Capital Market
- Labor Market
- Suppliers
- Technology Providers

BUSINESS ENVIRONMENT
- Geo-Political
- Regulatory/Legal
- Economy
- Natural Environment
- Culture

ANY ENTERPRISE
- capital
- human resources
- material/equipment
- technology

BUSINESS

MARKET
- Customers

Financial Stakeholders

COMPETITION

PERFORMANCE DESIGN LAB
The Anatomy of Performance
Anatomy of Performance – Summary

1. A business is a processing system:
   - The business organization transforms customer needs into valued products or services via a Value Chain of core processes
   - An organization is a value machine, producing value for both its customers and investors

2. Organization effectiveness requires alignment at three Levels:
   - Organization
   - Process
   - Function/Jobs/Performer
The Anatomy of Performance…

• An organization is a complex system of individuals, jobs, processes, functions, technologies and management.

• Organization performance or results are a function of how well these interdependent components are aligned and working toward clearly specified results.
The Anatomy of Performance is...

- A template for understanding any organization.
- A framework for linking individual performance to organization results (and requirements).
The Processing System Hierarchy

• A picture of the work infrastructure that links the individual to the organization.

• A picture of the value-adding work that must be managed if a company is to effectively and efficiently produce the desired valued products/services to its customers.
The Work That Must Be Designed, Aligned and Managed
Order Obtained Process

Opportunities Generated → Opportunities Qualified → Opportunity Developed and Proposal Requested → Proposal Prepared and Communicated → Sale Closed → Order Captured and Communicated

Sub-Process/Task/Sub-Task

Information Gathered
- Relevant Data Sources Identified
- Interviews Scheduled
- Interviews Conducted
- Conclusions Reached and Recorded

Opportunity Developed and Proposal Requested Sub-Process
- Information Gathered
- Needs Identified
- Deciders and Users Identified
- Constraints Determined
- Credibility Established
The Processing System Hierarchy..

• Clears away the fog..
• Provides the necessary structure to link results to work
• You can’t derive sound requirements unless you link technology to results
• And the linkage is through the work performed to produce those results
Using the PSH to Derive Requirements
The Tools for Capturing the PSH
### Business Process Architecture Framework

<table>
<thead>
<tr>
<th>Management</th>
<th>Performance Planned</th>
<th>Performance Managed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>Sold</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>Delivered</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
</tr>
</tbody>
</table>

### Cross Functional Process Map

<table>
<thead>
<tr>
<th>Step</th>
<th>Process 1</th>
<th>Process 2</th>
<th>Process 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
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<tr>
<td>2</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
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<tr>
<td>3</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
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<tr>
<td>4</td>
<td><img src="image" alt="Diagram" /></td>
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<tr>
<td>5</td>
<td><img src="image" alt="Diagram" /></td>
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<td><img src="image" alt="Diagram" /></td>
</tr>
</tbody>
</table>
## Linking Technology to Process

<table>
<thead>
<tr>
<th>User Interface</th>
<th>Order Screen</th>
<th>Order Tracking Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System Activities</strong></td>
<td><em>Order logged into order tracking system</em></td>
<td><em>Order data forwarded to Production System</em></td>
</tr>
<tr>
<td>Systems &amp; Databases</td>
<td><em>Order tracking system</em></td>
<td><em>Order tracking system</em></td>
</tr>
<tr>
<td>Linkages</td>
<td><em>XYZ production system</em></td>
<td></td>
</tr>
</tbody>
</table>
Linking Technology to Process

Order Fulfillment Process

Customer

SALES REP

Order completed

Order submitted

ADMINISTRATION

Order logged

FIELD OPERATIONS

ORDER ENTRY

Order accessed

Order checked

Finance

CREDIT AND INVOICING

User Interface

System Activities

Systems & Databases

Linkages

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Linking Process to People

Customer Order Flow

Customer
Sales
Credit and Invoicing
Production Control

Function: Assembly and Shipping

<table>
<thead>
<tr>
<th>Customer Order Process Step</th>
<th>Assembly and Shipping Subprocess Steps</th>
<th>Assembly and Shipping Roles and Responsibilities</th>
</tr>
</thead>
</table>
| Order Assembled and Shipped| A. Order Received
B. Order Assembled | Assembly Role
Shipping Role
Mgmt. Role |

Cross-Functional Roles/Responsibilities Matrix

<table>
<thead>
<tr>
<th>Process Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order Taken</td>
</tr>
<tr>
<td>Order Entered</td>
</tr>
<tr>
<td>Order Processed</td>
</tr>
</tbody>
</table>

Job Model

Job: Assembler

<table>
<thead>
<tr>
<th>Outputs</th>
<th>Critical Dimension</th>
<th>Measures</th>
<th>Standards</th>
<th>Performance Support Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incoming Order Received &amp; Reviewed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Linking Process to People

Customer Order Flow

Cross-Functional Roles/Responsibilities Matrix

Job Model

Functional Roles/Responsibilities Matrix

Job: Assembler

Outputs
Critical Dimension
Measures
Standards
Performance Support Requirements

Incoming Order Received & Reviewed

Function: Assembly and Shipping

Customer Order Process Step

Assembly and Shipping Subprocess Steps

Assembly and Shipping Roles and Responsibilities

Assembly Role
Shipping Role
Mgmt. Role

Order Assembled and Shipped

A. Order Received
B. Order Assembled

Order Taken
Order Entered
Order Processed
Linking Process to People

Customer Order Flow

- Customer
- Sales
- Credit and Invoicing
- Production Control

Functional Roles/Responsibilities Matrix
- Function: Assembly and Shipping
- Customer Order Process Step
  - Order Taken
  - Order Entered
  - Order Processed
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- Job: Assembler
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- Critical Dimension
- Measures
- Standards
- Performance Support Requirements
- Incoming Order Received & Reviewed

Cross-Functional Roles/Responsibilities Matrix
- Function: Sales, Credit and Invoicing, Production Control, Production and Assembly and Shipping
- Process Step
- Order Taken
- Order Entered
- Order Processed

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Linking Process to People

Customer Order Flow

Cutomer Order Flow

Functional Roles/Responsibilities Matrix

Cross-Functional Roles/Responsibilities Matrix

Function: Assembly and Shipping

Job Model

Job: Assembler
2 Topics

1. How to achieve alignment of business requirements to process, people and technology

2. How to identify and address potential obstacles to human performance enabled by technology
The Human Performance System (HPS)
The Ideal HPS

- Clear or sufficiently recognizable indications of the need to perform
- Minimal interference from incompatible or extraneous demands
- Necessary resources (budget, personnel, equipment) to perform

- Necessary understanding and skill to perform
- Capacity to perform both physically and emotionally
- Willingness to perform (given the incentives available)

- Adequate and appropriate criteria (standards) with which to judge successful performance

- Frequent and relevant feedback as to how well (or how poorly) the job is being performed

INPUT → OUTPUT → CONSEQUENCES

PERFORMER

FEEDBACK

- Sufficient positive consequences (incentives) to perform
- Few, if any, negative consequences (disincentives) to perform
About the HPS

• The HPS model applies to everyone

• The HPS model can:
  ➢ Predict likely performance (i.e., what most people will do most of the time, but can vary by performer)
  ➢ Explain the reasons for good and poor performance
  ➢ Explain why many performance problems seem to recur
  ➢ Explain why many well-intended performance improvements don’t seem to stick

• The HPS model can be used to:
  ➢ Alter job conditions to improve the likelihood of permanent improved performance
  ➢ Design the conditions for good performance
Technology & the HPS

- Clear or sufficiently recognizable indications of the need to perform
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The Impact of Technology on the HPS

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INPUT → PERFORMER → OUTPUT

FEEDBACK

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A Consequence…

• May be positive or negative
• Immediate or delayed
• Certain or uncertain
• Comes from a variety of sources
• May be an event or a thing
• May be “natural” or “engineered”
• Varies in impact depending on the performer
Vertical Alignment of the HPS
Horizontal Alignment of the HPS

Goals
HPS for Performance Analysis
HPS Analysis Tool

INPUT/SIGNAL (WHAT INDICATES THAT ACTION IS REQUIRED?)

INPUT/RESOURCES (WHAT RESOURCES ARE AVAILABLE TO ASSIST THE PERFORMERS?)

3 Bags

Airline Ticket Agent

PERFORMER(S)

Collect Fee

UNDESIRED OUTPUT (WHAT DO THE PERFORMERS DO?)

Do not Collect

DESIRED OUTPUT (WHAT SHOULD THE PERFORMERS DO?)

FEEDBACK: WHAT FEEDBACK DO THE PERFORMERS RECEIVE?

FEEDBACK

What Information?  What Source?  How Often?

IMMEDIATE  DELAYED

олод Cust  More work  Mgr

CONSEQUENCES TO THE PERFORMER(S)

WHAT HAPPENS TO THE PERFORMERS WHEN THEY TAKE THE DESIRED ACTION?

More $  Poor CS  Loss of Mkt Share

CONSEQUENCES TO THE ORGANIZATION

IMMEDIATE  DELAYED

олод Cust  Less work  Mgr

CONSEQUENCES TO THE PERFORMER(S)

WHAT HAPPENS TO THE PERFORMERS WHEN THEY TAKE THE UNDESIRABLE ACTION?

Better CS  Less $
Part A-Excess Baggage Fee Collection

Excess Baggage Fee Collection Sub-Process

<table>
<thead>
<tr>
<th>Customer</th>
<th>Ticket Agent</th>
<th>Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form completed</td>
<td>Excess baggage form provided</td>
<td>CRM System</td>
</tr>
<tr>
<td></td>
<td>CRM screen called up</td>
<td>CRM System</td>
</tr>
<tr>
<td></td>
<td>Customer information verified</td>
<td>CRM System</td>
</tr>
<tr>
<td></td>
<td>Customer data entered</td>
<td>EBF System</td>
</tr>
<tr>
<td></td>
<td>EBF screen called up</td>
<td>EBF System</td>
</tr>
<tr>
<td></td>
<td>Customer information reentered</td>
<td>CRM System</td>
</tr>
</tbody>
</table>
Part B-Excess Baggage Fee Collection

Excess Baggage Fee Collection Sub-Process
Excess Baggage Fee Collection Sub-Process

Customer:
- Form completed
- Credit card information provided

Ticket Agent:
- Excess baggage form provided
- CRM screen called up
- Customer information verified
- Customer data entered
- EBF screen called up
- Customer information reentered
- Customer credit card requested
- Credit charge processing screen called up
- Customer payment entered in EBF system
- Receipt screen called up
- Customer receipt printed
- Transaction recorded in CRM system
- Receipt given to customer

Systems:
- CRM System
- EBF System

Elapsed Time:
- 2 minutes
- 2 minutes
- 2 minutes
- 2 minutes
- Total: 8 minutes

Consequences to the Performer:
- Positive
- Negative
Rules of Thumb for HPS Analysis

- Often, the cause of poor performance is some combination of elements in the HPS
  - Inadequate training, time pressure, unclear directions, lack of feedback

- The most commonly missing element is feedback
  - No feedback, unclear feedback, useless data, too much data, punishing feedback, etc.

- The strongest predictor of undesired performance is the presence of strong negative consequences

- “Undesired performance” doesn’t mean doing nothing—it usually means doing something else instead

- The least likely culprit in the HPS for repetitive poor performance is the human performer
HPS for Process/Technology Design
## HPS in Testing Scenarios

<table>
<thead>
<tr>
<th>Step</th>
<th>Navigation</th>
<th>Script</th>
<th>Expected Result</th>
<th>Actual Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Inputs</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Review work. Certify that work is ready for inspection.</td>
<td>Ready for Inspection sheet signed.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Group Access work step 26</td>
<td>Move work to work step 26 in Group Access. Deliver files to the inspection team.</td>
<td>Inspection Packet delivered to Inspection Leader.</td>
<td>Packet complete &amp; accurate</td>
</tr>
<tr>
<td>3</td>
<td>ISIS Receive Contract Change screen Manual Change Entry screen View All Contract Changes screen</td>
<td>Enter received data into automatically. Manually enter contract changes. Receive contract changes.</td>
<td>All contract change files successfully received.</td>
<td>On-line contract change files Hard-copy contract change files</td>
</tr>
</tbody>
</table>
The Truth about the HPS

“If we put a good performer in a bad system (HPS), the system will win every time.”
The 3 Essential Capabilities

People
Technology
Process
Value