



Air Traffic Organization

Creating a Performance Based ATO in the FAA

Wilson N. Felder
ATO Transition Team



Why Create a New Air Traffic Organization? (part 1)



Air Traffic Organization

- Most important answer: practical
 - Pace of growth, and changes in aviation industry, require us to be even more customer focused than we have been.
 - Alignment and focus of resources at point of service delivery improves speed, flexibility, response, and efficiency
- FAA was slow to deploy new technology
- A process improvement study demonstrated:
 - Not a process problem, fundamental issues with the structure of the organization
 - Stop signs
 - Exponentially increasing interfaces

Why Create a New Air Traffic Organization? (Part 2)



Air Traffic Organization

National Civil Aviation Review Commission

“ FAA’s management must become performance based. The Commission recommends that services related to the air traffic system be placed in a Performance Based Organization (PBO), which is managed by a Chief Operating Officer and overseen by a board of public interest directors.”

Executive Order 13180 (amended)

“ The Secretary of Transportation (Secretary) shall, consistent with his legal authorities, move to ***establish within the Federal Aviation Administration (FAA) a performance-based organization to be known as the “Air Traffic Organization” (ATO).***”

The President’s Management Agenda

“ The first priority of the President’s management reform initiative is to make government citizen-centered. The number of layers in government must be compressed to reduce the distance between citizens and decision-makers. . . . Agencies will reshape their organizations to meet a standard of excellence in attaining the outcomes important to the nation.”

The Burning Platform

Our Future is in Peril if the ATO Can't Lead



**Air
Traffic
Organization**

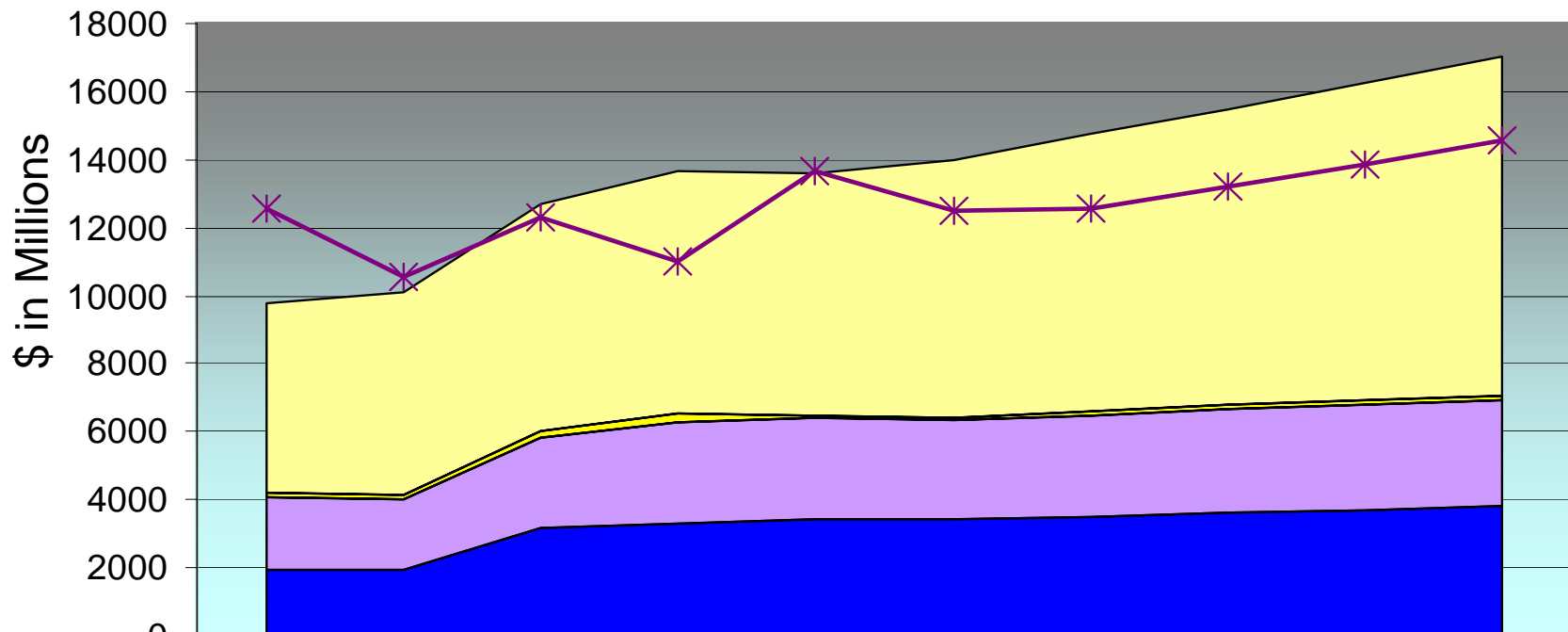
- **Customers** find it difficult and confusing to access organizational points of accountability for services. No central, consistent customer service strategy exists.
- **Owners** perceive the operating budget and costs are uncontrollably growing, and productivity is declining.
- **Employees** are sensing low morale and loss of pride in the organization. They perceive a lack of consistency and accountability to shared goals and objectives.



FAA Cash Flow Expected to Exceed Revenues



**Air
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	1999	2000	2001	2002	2003	2004 Request	2005	2006	2007	2008
OPS	5586	5957	6639	7086	7077	7590	8121	8690	9298	9949
RED	150	157	187	245	124	100	120	120	120	120
F&E	2121	2034	2651	3006	2981	2916	2993	3053	3110	3153
AIP	1950	1950	3200	3300	3400	3400	3500	3600	3700	3800
General Fund, Revenue + Interest	12563	10544	12270	10995	13666	12518	12537	13191	13851	14562

ATO History



Air Traffic Organization

- ATO Design Team 2001-2002
- 2003: COO Appointed, Transition Team named
 - Jim Link, Bob Long, Wilson Felder, Ed Moy, Bill Ellis
- Team expanded
 - Training, HR, Finance, Communications, Metrics, AT, AF
- Rollout November 2003
- Initial realignment early February 2004
- Value analysis January – June 2004
- Second phase realignment Fall 2004

CUSTOMERS



Commercial Aviation

- Airlines
- Cargo

Business Aviation

Private Aviation

DHS *(and other Government Agencies)*

Military (DOD)*

** Partner with ATO*

OWNERS

U.S. Citizens*

Traveling public*

Taxpayers*

**As represented by Congress*

Office of Management and Budget

Secretary of Department of Transportation

Inspector General

EMPLOYEES

ATO Individual Federal Employees

Labor Unions



Air Traffic Organization

The ATO will be the global leader in providing the greatest value to our customers, owners and employees in delivering the safest, most secure air traffic services



Mission

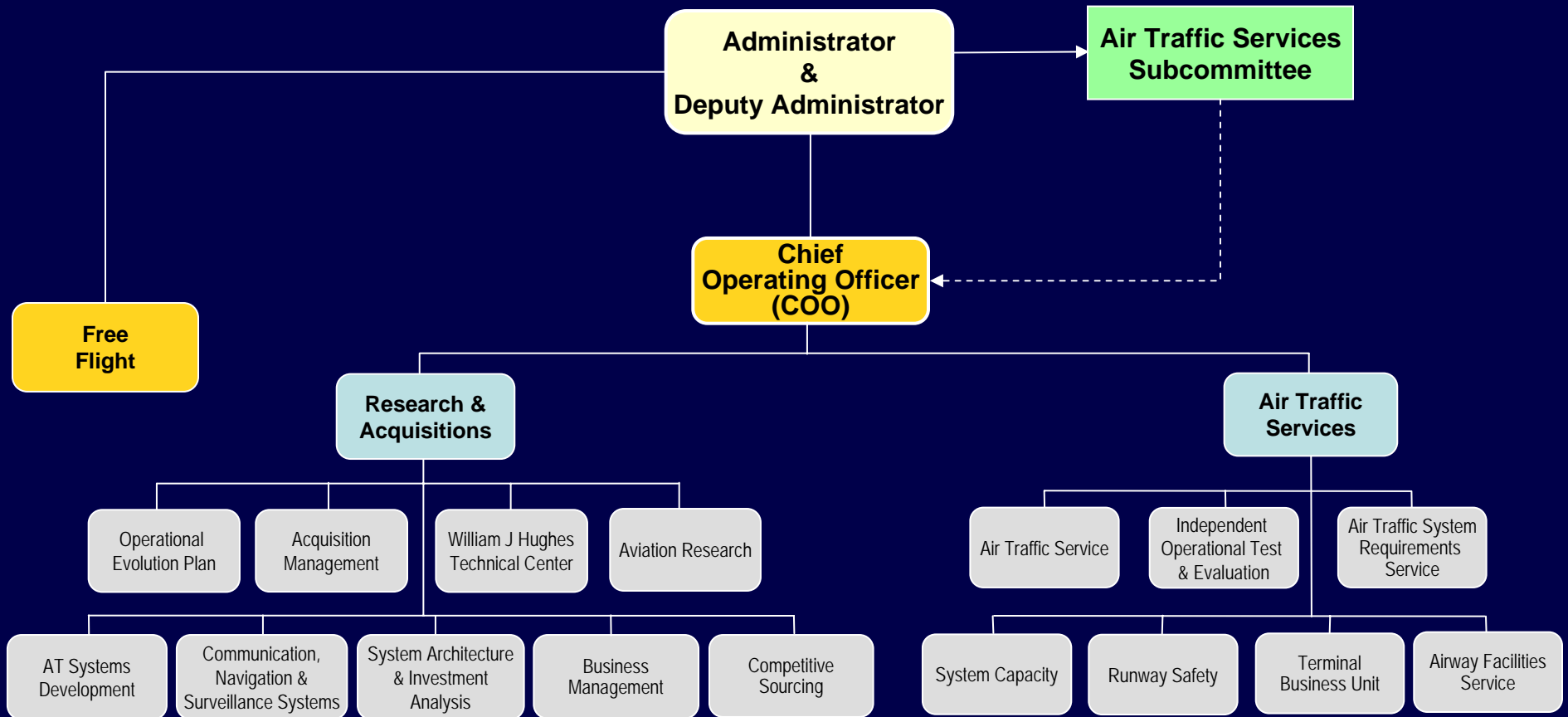
- Deliver the value and high-quality air traffic services that our customers want.
- Provide safe, secure, and cost-effective air traffic services that our owners expect, now and into the future.
- Create a professional workplace for our employees to excel and be innovative, fostering enthusiasm and pride for our vision and the services we provide.
- Be accountable for our performance in providing air traffic services, with clear and specific goals linked to our customers, owners, and employees.



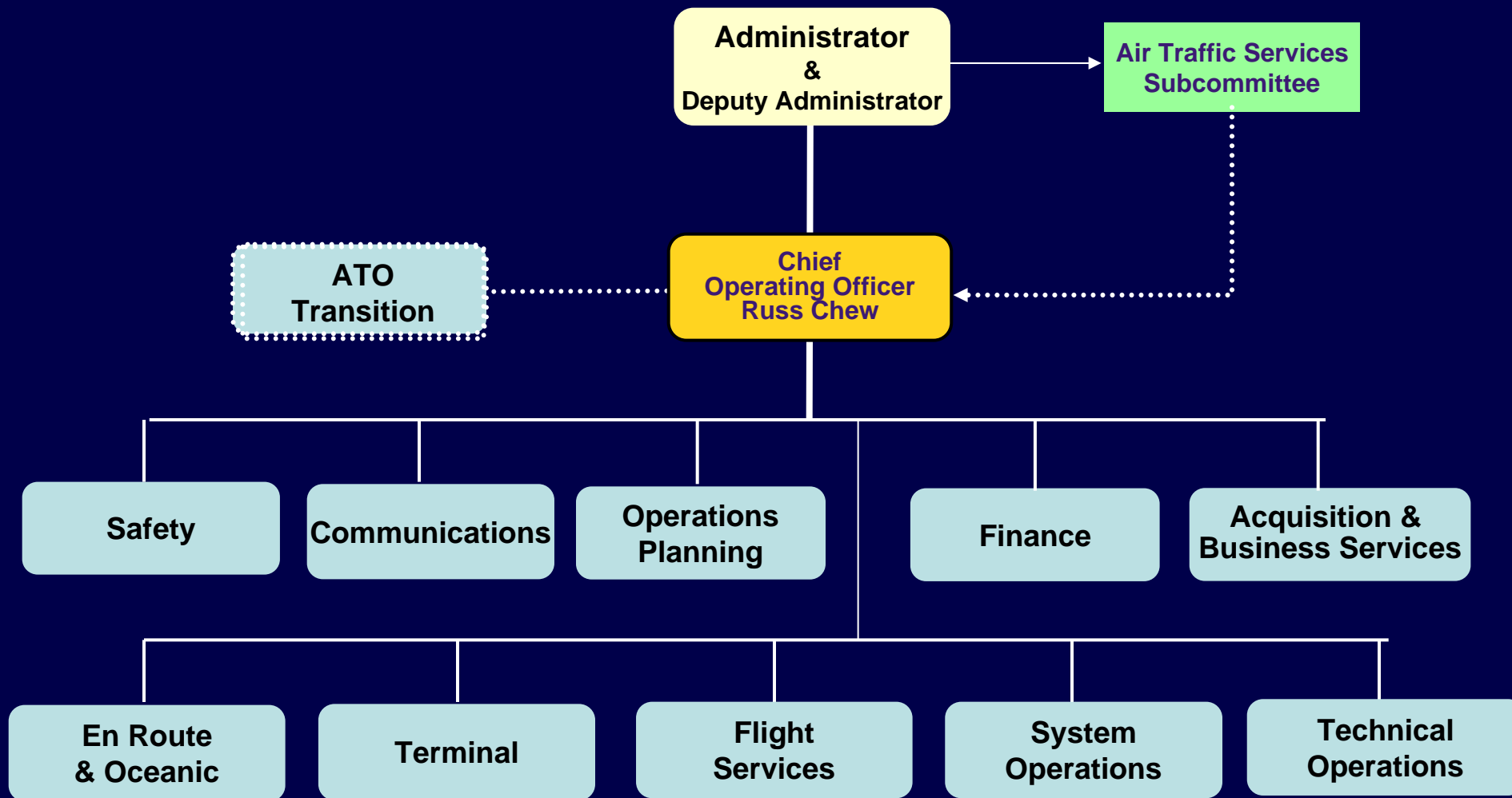
**Air
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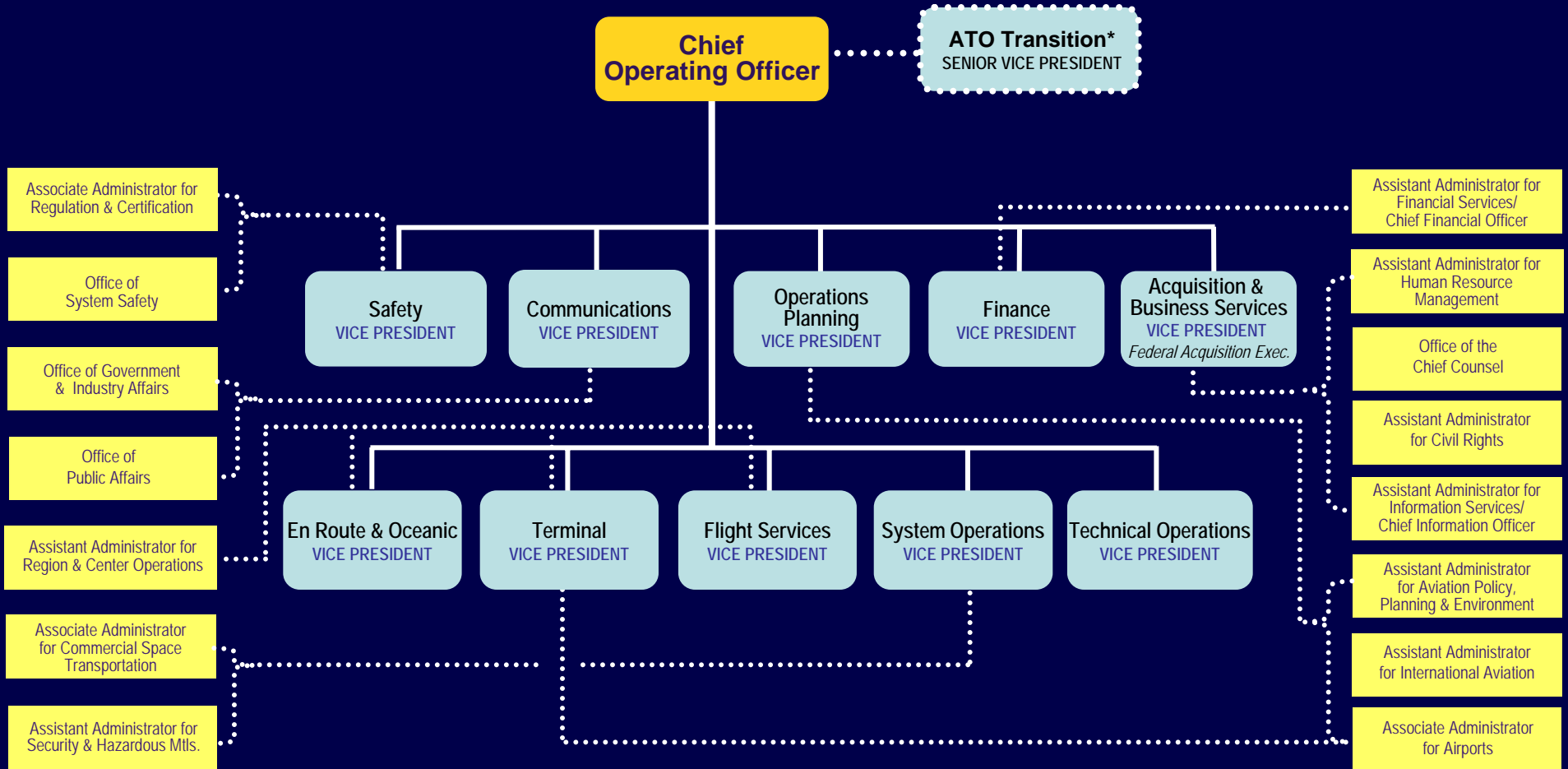
Reporting in Existing Organization



Reporting in New Organization



FAA Liaisons



The New ATO Organization



Air Traffic Organization

- **Operate as clearly defined, service-based business units**
 - Cost Accounting is essential and necessary
- Ensure **affordability** in operations planning... connection between expense planning and capital budgeting
 - Reduce unit cost of sustaining existing services
- Create **transparency** in financial and decision processes
 - Satisfy expectations of Customers, Owners, and Employees.
- **Streamline** by simplifying matrix management processes
 - Examples: Major Acquisitions, System Operating Priorities, etc.

A Window of Opportunity Exists



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➤ *Time is Short*

- Must complete the reorganization in FY2004 to achieve the desired results and performance baselines for FY2005.
- ATO business unit alignment must be concluded before redefinition begins in early 2004.

➤ *Plan is Very Aggressive*

- **Phase 1:** Redefinition and Cost Accounting.
- **Phase 2:** Cost Control and Productivity.
- **Phase 3:** Service Value and Innovation.

Transition Phases



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➤ **Phase 1: Realignment and Cost Accounting**

- Complete Business and Management *Realignment*
- *Activity-Value Analysis* and *Process Blueprinting*
- Put *cost accounting* and *labor distribution* in place
- Management business training (*budget and spending*)
- Develop Basic Financial Processes (*budget, spending, reporting*)

➤ **Phase 2: Control Unit Costs**

- Develop *Operating Plan* tied to *Budgeting*
- Establish *cost management targets* and *charge-back opportunities*
- Management business training (*value & innovation*)

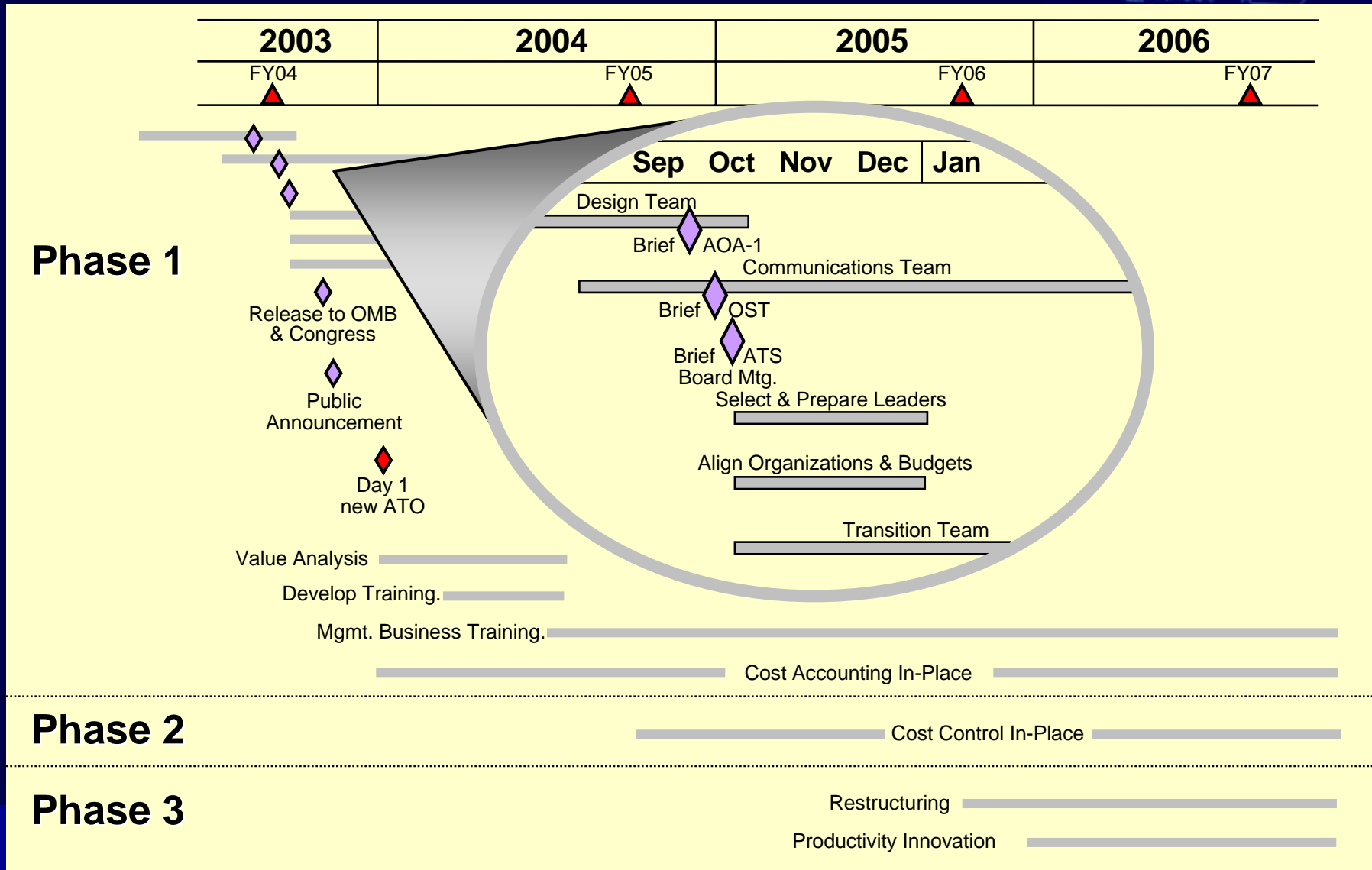
➤ **Phase 3: Improve Service Value and Innovation**

- Explore *economies of scale*
- Showcase *results* and promote *innovation*

Schedule for ATO Implementation



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ATO Launch Elements



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- **November Kickoff Meeting**
 - ATO All-Hands meeting
 - Owner Outreach: Congressional Briefings
 - Media Outreach
- **Employee and Customer Outreach**
 - National “Outreach Tour” Field Visits
 - Industry Trade Associations
- **Sustainable Communications**
 - Customers, Owners, Employees







Air Traffic Organization

ATO Financials: New Dimensions for a New Day

NEXTOR Metrics Conference
Asilomar
January 2004



New Focus

- The focus of the ATO will be on customer value
- ATO will operate on business principles
 - Line organizations – En Route, Terminal and FSS service units will operate on a profit and loss basis
 - Profit and loss will be a measure of efficiency
 - Support organizations will be measured by value added
 - Managers will be held accountable for meeting financial and business targets
 - Management throughout the organization will focus on cost
 - ATO will focus acquisitions on ability to reduce long term costs

New Focus

- ATO system wide financial metric will be “cost per flight hour”
- Service units will have separate financial metrics
- Unit cost measures will be developed
 - Service units will need to define their outputs – “units”
 - Outputs must produce “value” to our customers, our owners, and our employees
 - Service units may have different outputs and measures
 - Unit cost will initially be based on current cost plus a margin rate; eventually on market/economic value basis
 - ATO will establish unit cost rate targets to drive management behavior and efficiencies

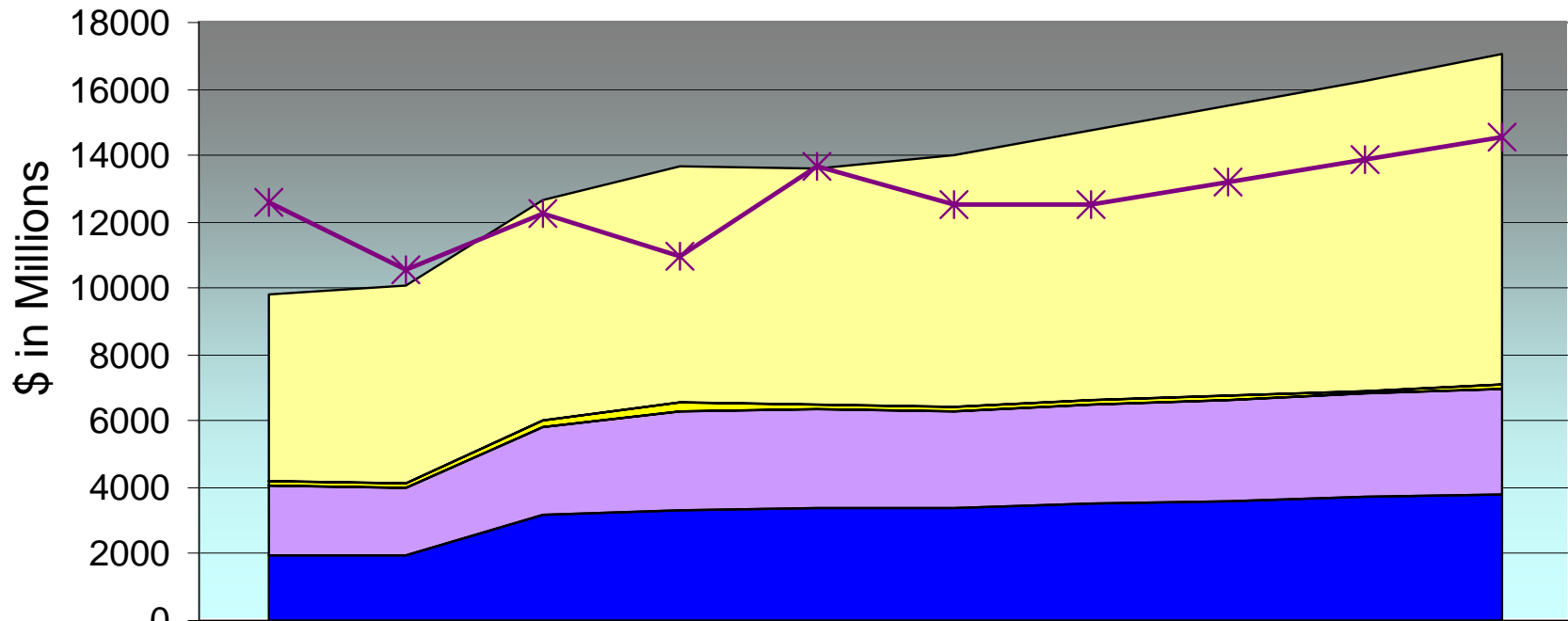
Old



Air Traffic Organization

- FAA has managed spending – not cost
 - In the past, cost (budget) reductions were a means to an end
 - i.e., to stay within budget
 - Budget based on prior year spending
 - Little control and flexibility over staffing
 - Capital acquisitions were made without regard to long term cost impact to the operation
 - No way to measure benefits of capital acquisitions
- ATO's cost growth will outstrip resources in the future

FAA Cash Flow Expected to Exceed Revenues



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Notes



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- Outyear budget numbers for AIP, F&E, and RED are based on our new reauthorization legislation.
- OPS numbers assume 7% annual growth (pay and non-pay) based on past experience. Reauthorization does not accommodate growth at this level.
- Funding line includes Trust Fund revenue, TF interest, and assumes an annual 12% General Fund contribution. TF revenues are based on current forecast projections.
- The chart shows that anticipated revenue from all sources is inadequate to meet anticipated costs.
- Subsequently issued Administration targets are significantly lower than the reauthorization levels.

New



Air Traffic Organization

- ATO will focus on cost
- Managers will be held accountable for meeting financial targets
 - Containing or reducing unit costs
 - Service units manage costs to create reinvestment potential

Step 1 – Setting Unit Cost



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- Financial metrics are set based on actual costs divided by number of activities – “units”
- Operating margin will be negotiated to allow for investment and to measure efficiency
 - Are we staying ahead of the cost curve?
- Future financial metrics will be more refined as ATO service units focus more on value

Step 1 – Set Unit Cost

Price calculation

FY 2002 Total Cost	\$563,984,275
FY 2002 Activities*	16,777,760
FY 2002 Cost per Activity	\$33.61
FY 2003 Cost Escalation Rate	3%
FY 2003 Cost Adjusted	\$34.46
Target Margin	-3%
FY 2003 Price per Activity	-\$33.42

FY 2002 Actual Cost *

FY 2002 Actual Workload Count **

* Based on FY 2002 actual expenditures from CAS. Includes Direct, Indirect, and Depreciation

** AFSS Aircraft contacted; Flight Plans Originated; Advisories; Pilot Briefings

Step 2 - Revenue Plan



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- Project revenue by site/ by month based on trend analysis
- Revenue = activity x rate
- Accommodates site specific fluctuations, i.e. seasonal variations
- Revenue equals anticipated appropriation



Step 2 – Revenue Plan

FY 2003 Price	\$33.42
FY 2003 Anticipated Revenue	\$583,141,249.00
FY 2003 Anticipated Appropriation	\$600,635,486.00
FY 2003 Operating Margin	\$17,494,237.00

Computed cost based on FY 2002 actual experience



Step 3 -Compare Revenue to Cost

- High level analysis will indicate whether or not the ATO service unit expects to achieve margin targets
- Financial analysis of site costs:
 - Expenditure trends over time
 - Predict pay and inflation escalation
 - Develop cost forecast by month/by site
- Compare forecasted revenue to projected costs
- Identify sites with a cost to revenue imbalance

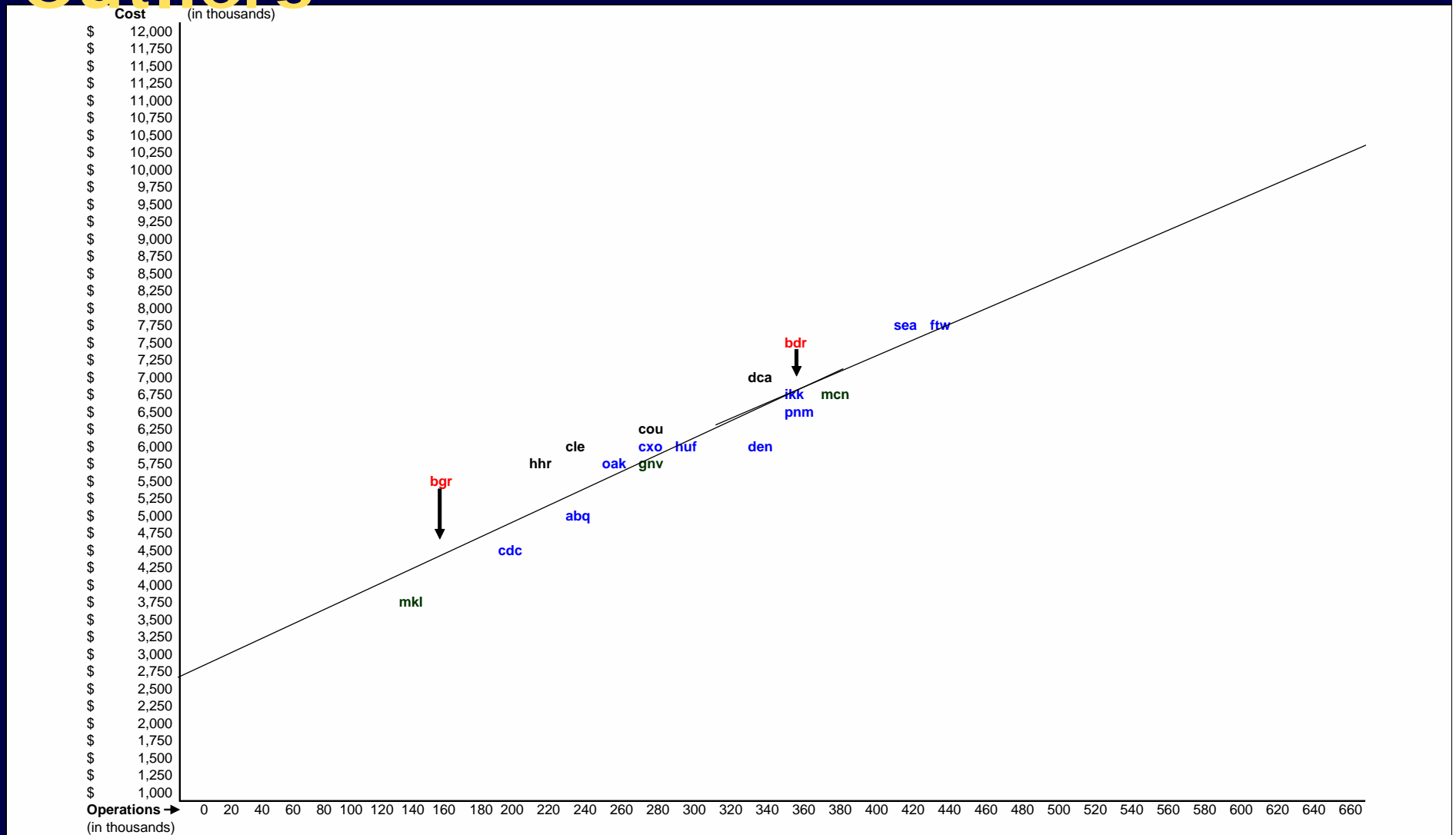
Step 4 - Setting Financial Targets



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- Model activity vs. cost
 - Identify outliers
 - Forecast unit cost if outliers are brought to agency averages
 - Evaluate attractive business initiatives
- Set margin target for ATO service unit
 - Management will set single and multiple year financial/cost targets
- Service unit will develop management plan to drive change at each facility

Step 4 – Setting Financial Targets Identifying Outliers



Step 4 – Setting Financial Targets

Air Traffic Operations Flight Services Service Unit

10 Lowest cost per operation AFSS Facilities

(Agency average \$26.65)

Reg	Locations	Ident	Cost per Operation	FY02 Counts	FY02 Ops Cost
SO	St Petersburg AFSS	PIE	\$ 14.99	631,813	\$ 9,470,672
SO	Miami AFSS	MIA	\$ 16.16	650,605	\$ 10,510,762
WP	Prescott AFSS	PRC	\$ 17.37	407,558	\$ 7,078,742
EA	Millville AFSS	MIV	\$ 17.79	328,767	\$ 5,849,024
SO	Raleigh AFSS	RDU	\$ 18.63	341,206	\$ 6,355,098
SW	San Angelo AFSS	SJT	\$ 19.10	340,161	\$ 6,496,676
SW	Mc Alester AFSS	MLC	\$ 19.45	276,472	\$ 5,377,601
SO	Anniston AFSS	ANB	\$ 20.47	294,632	\$ 6,030,044
SO	Gainesville AFSS	GNV	\$ 20.52	361,197	\$ 7,413,523
GL	Grand Forks AFSS	GFK	\$ 20.55	201,996	\$ 4,150,887

Step 4 – Setting Financial Targets

Air Traffic Operations Flight Services Service Unit

10 highest cost per operation AFSS Facilities
(Agency average \$26.65)

	Location	Identifier	Cost per Op	Count	FY-02 Ops Cost
EA	Islip AFSS	ISP	\$ 32.19	196,534	\$ 6,326,182
NE	Burlington AFSS	BTV	\$ 32.41	194,824	\$ 6,314,147
EA	Buffalo AFSS	BUF	\$ 32.94	146,031	\$ 4,809,885
SO	Greenwood AFSS	GWO	\$ 33.77	142,692	\$ 4,818,037
NM	Boise AFSS	BOI	\$ 35.03	103,269	\$ 3,617,243
NM	Casper AFSS	CPR	\$ 36.21	108,663	\$ 3,934,432
CE	Fort Dodge AFSS	FOD	\$ 36.36	161,258	\$ 5,863,371
WP	Honolulu AFSS	HNL	\$ 36.60	134,641	\$ 4,927,608
CE	Columbus AFSS	OLU	\$ 37.78	131,885	\$ 4,982,317
SO	Jackson AFSS	MKL	\$ 42.01	111,061	\$ 4,665,896

← Example

Step 5 – Develop Business Plan

FSS Comparative Boise Cost Analysis: FY01-02

Boise (BOI) ID AFSS

- Boise FY01 cost per customer contact was \$28.67, \$4.02 higher than average. The FY02 cost increased to \$35.03, the sixth highest cost per customer contact with overall AFSS average cost per customer service of \$26.65.

Cost: FY02 ATS Operating Cost increased 9.82% (\$323K) with air traffic labor 69% of the total operating costs, increasing \$244K (10.8%) and AF labor cost remaining virtually flat at 8 % of total operating cost. Other changes include + \$15K AT Academy Training cost, + \$34K Telco cost, and + \$12K Utility cost.

Customers: FY02 Customer Contacts decreased by 11,635 (10.13%) with the majority of the decrease occurring in pilot briefings. Boise AFSS customer contacts for FY02 is the lowest of all AFSS facilities at 103,269.

FSS Comparative Boise Cost Analysis

FY01-02 (cont'd)

Recommended cost management actions:

- Primary candidate for less than 24-hour operation to reduce staffing to a level commensurate with customer demand. Use call off-loading (call forwarding) to Cedar City. Use technology to maximize capability (call offloading, re-evaluate flight plan area, discontinue TIBS, etc)
- Decrease direct CWF to 13 (8K customer contacts per specialist)
- Contain number of supervisors at three
- Achieve Direct to Indirect ratio of 4:1 minimum (13/4 = 4 supervisor, management, support, administrative positions)
- Evaluate ANM Regional AT/AF overhead costs

Estimated cost reductions due to implementing recommended actions:

- \$ 900,000 reduce CWF staffing total from 22 to 13
- 100,000 achieve Direct: Indirect ratio 4:1
- 120,000 reduction in medical, OWCP, and Overhead due to staff reduction
- **\$1,120,000**
- (\$2,497,243 new operating cost / FY02 number of ops 103,269 = \$24.18)

Expected Results: \$24.18 cost per Customer Contact

Key Definitions for Model

- Revenue – prior actual FY cost escalated for % increase in appropriation from prior year
- Contribution – or Margin – is that organization's contribution to the next level organization's controllable costs

Responsible Organization	Contribution
Flight Service Station	Revenue less FSS controllable cost
Flight Service Unit	FSS contribution less Flight Service Unit controllable cost
ATO	Flight Service Unit less ATO controllable cost

Unit Cost Breakdown - Controllable (Notional)

	Unit Price	% Controllable Cost	Responsible Office
Revenue	\$20.19	100.0%	
Flight Service Station	\$15.12	74.9%	Station Unit Manager
Service Unit	\$1.54	7.6%	James Washington
ATO	\$1.87	9.3%	Russell Chew
Agency	\$1.66	8.2%	Administrator
	\$20.19	100%	

FSS Summary Example (Notional)

		FSS Stations	Total FSS Stations \$(millions)	Unit Price *	% Price
		1.....61			
Flight Service Station: (to Unit)	Revenue	X X X X X X X X	485	\$20.19	100.0%
	Less Controllable costs		364	\$15.12	74.9%
	Contribution (Margin) Rate		121 25.0%	\$5.05	25.0%
Flight Service Unit: (to ATO)	Flight Service Station Contribution (Margin)	X.....X	121	\$5.05	25.0%
	Less Controllable costs		37	\$1.54	7.6%
	Contribution (Margin) Rate		84 17.4%	\$3.51	17.4%
ATO: (to Agency)	Flight Service Unit Contribution (Margin)		84	\$3.51	17.4%
	Less Controllable costs		45	\$1.87	9.3%
	Contribution (Margin) Rate		40 8.2%	\$1.66	8.2%

* based on 24,046,363 units in FY03

How We Might Manage – How We Do Budget Restructuring

	FSS Stations	Total FSS Stations \$(millions)	Unit Price *	% Price	Target Price	Target Margin
	1.....61 X X X X X X X X	485	\$20.19	100.0%		
Revenue						
Less Controllable costs		364	\$15.12	74.9%	\$ 14.97	1.00%
Contribution (Margin) Rate		121 25.0%	\$5.05	25.0%		
Flight Service Station Contribution (Margin)	X.....X	121	\$5.05	25.0%		
Less Controllable costs		37	\$1.54	7.6%	\$ 1.46	0.52%
Contribution (Margin) Rate		84 17.4%	\$3.51	17.4%		
Flight Service Unit Contribution (Margin)		84	\$3.51	17.4%		1.52%
Less Controllable costs		45	\$1.87	9.3%		
Contribution (Margin) Rate		40 8.2%	\$1.66	8.2%		

Targets for next operating period

Available for Re-investment

Model

- The cost elements of ATO come directly from existing ATS CAS financial data
- The structure for financial measurement and reporting is based on controllable costs tied to the unit of performance
- Each Service Unit has individual unit and Service Unit specific controllable costs that will be tied to revenue
- ATO is the summation level for all ATO Service Units



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The Challenges

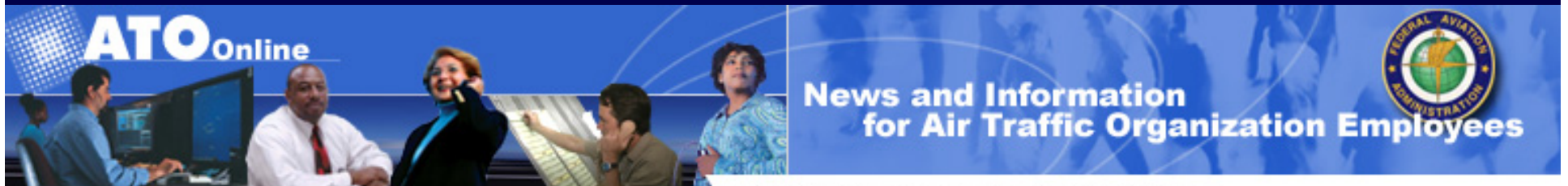
- Cash vs. Accrual – FAA, Gov't on cash basis
- Validation of actuals for number of service units delivered (for revenue determination)
- Need measure for resource / asset management such as a Return on Assets, i.e. Contribution on Assets (COA)
- Within the new ATO we need to reevaluate the business rules
- We need a CAS that works
- We need to change our collective thinking



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<http://www.ato.faa.gov>



ATO Home | VOICE | FAA Intercom | FAA Internet |





Air Traffic Organization

Back Up



Initial Assessment - General



Air Traffic Organization

- Opaque organizational processes and costs
- No unified detailed vision of business goals
- Highly complex, convoluted decision-making processes
- Incremental approach to new requirements
- Fragmented process overlap and redundancies
- Top leadership changes impact continuity
- Conflicting priorities between Air Traffic Services and Research & Acquisitions



What's Going On?

Current Organization is Problematic

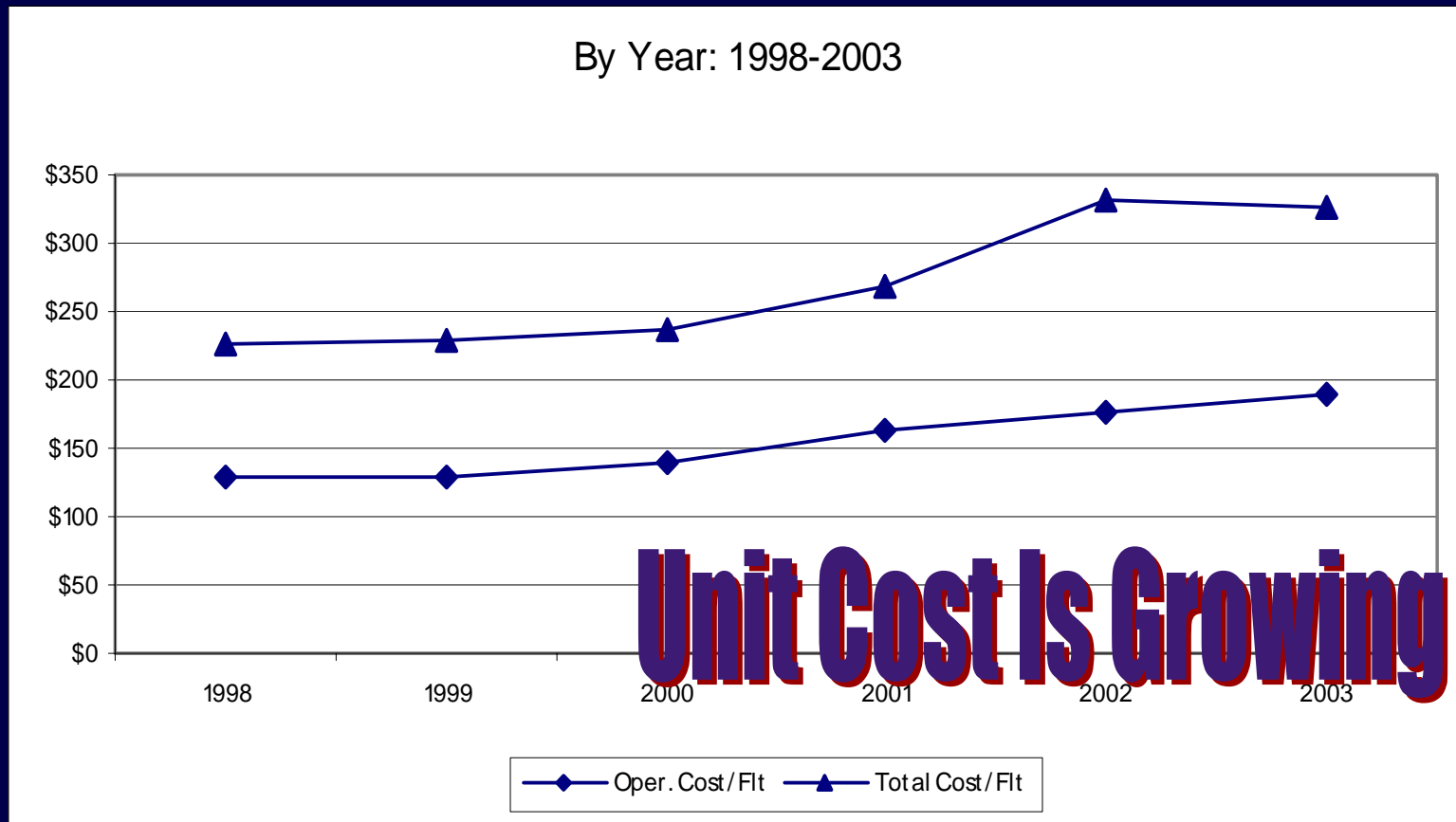


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- It evolved from conventional structure: Strict “stovepipe” protocols, deeply layered, with highly-complex and fragmented cross-linked decision requirements.
- Organization is tied up in processes that inhibit ability to deliver cost efficient services on schedule.
- Management accountability for results is **weak and not supported well by a limited reward and penalty structure.**
- **Growth in operating costs** and funding restrictions preclude a sustainable **reinvestment in people, facilities, and innovation.**

Unit Cost (Budget)

Operations vs. ATO Total "Cost" per Flight

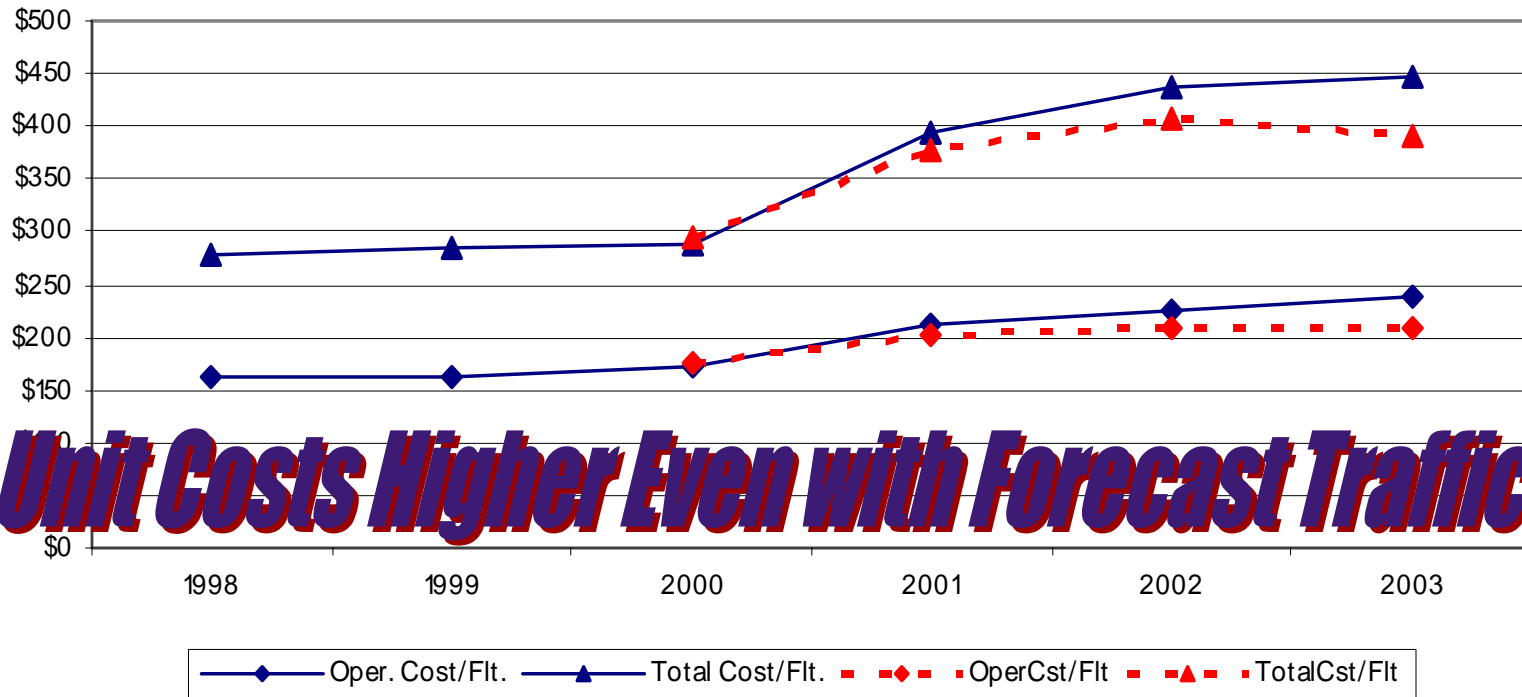


ATO (ATS+ARA) OPERATIONAL COST PER FLIGHT AND TOTAL COST FLIGHT (LESS AIRPORT GRANTS)

Unit Cost (Budget)

Operations vs. ATO Total "Cost" per Flight
Actual vs. Forecast Traffic Levels

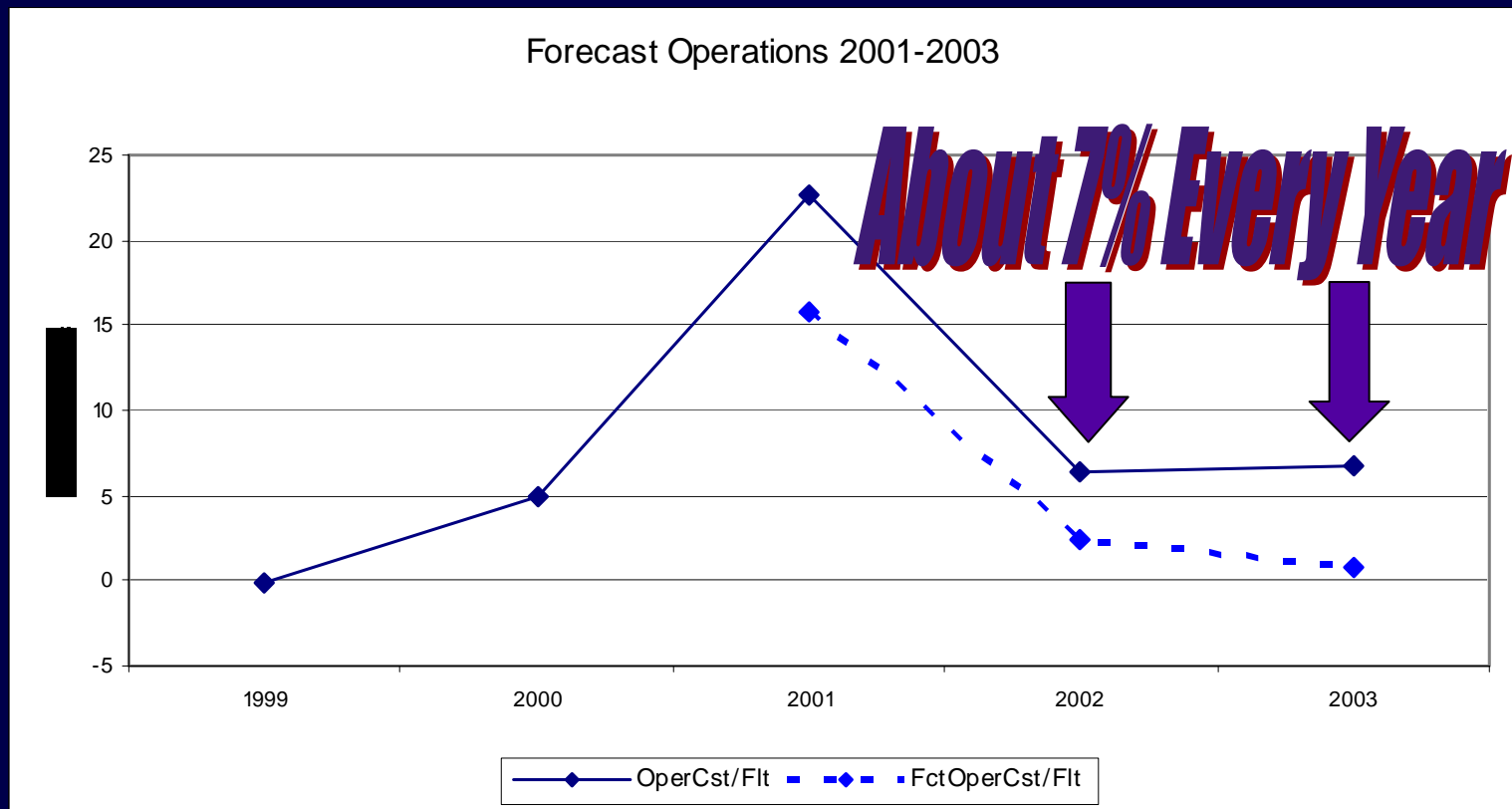
By Year, 1998-2003 - Cost Adjusted for Forecast Operations



Unit Costs Higher Even with Forecast Traffic

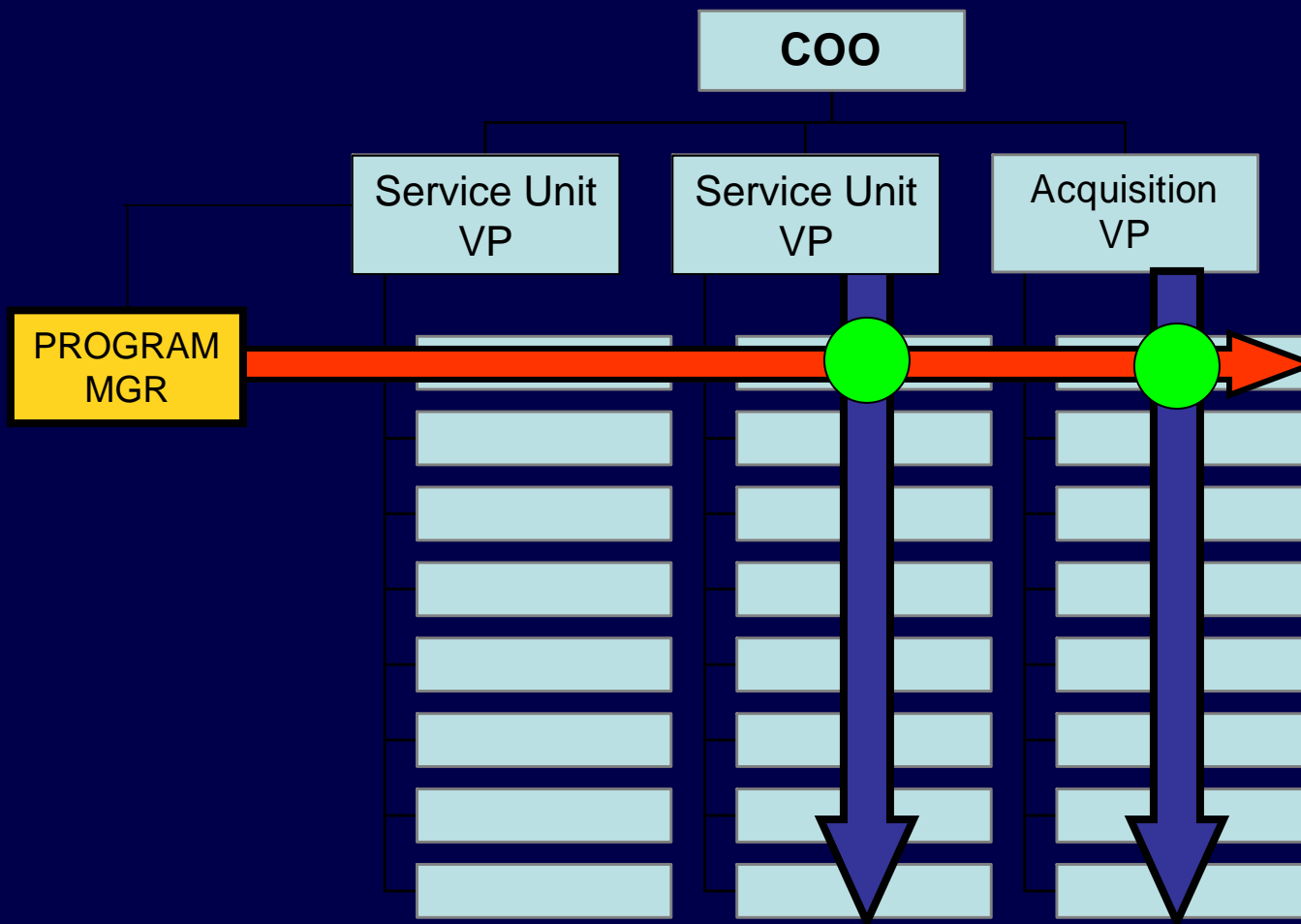
Unit Cost (Budget)

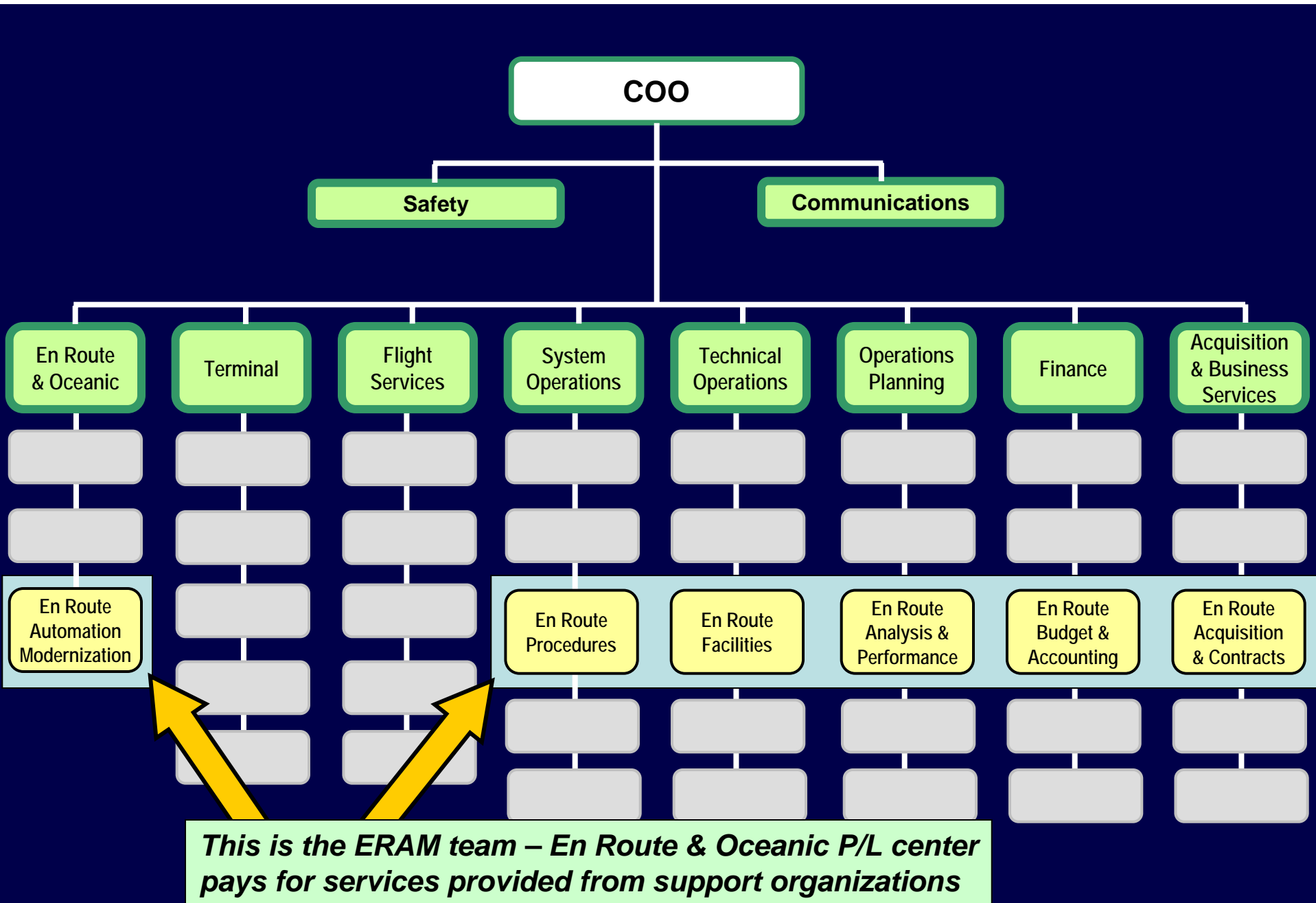
Year-Over-Year Rate of Change - Operations



The Matrix Organization

Example Program Coordination





Major Acquisitions in the ATO

What's Different?

➤ ***Reduce Overruns by Making Acquisition Decisions “Stick”***

- Data-driven decision is made by the ATO Line of Business Executive.
- Simpler, linear decision path of accountability
 - No random revisiting of actions based on desires of distributed power centers.
- Acquisitions aligned with each Line of Business (point of service delivery)
 - Accountability for funding and performance are kept aligned.

➤ ***Reduce Overruns by Minimizing Requirements “Creep”***

- Acquisition, investment analysis, planning, design, development, and implementation requirements all aligned in the same ATO Line of Business.

➤ ***Execution of Standard Acquisition and Business Processes***

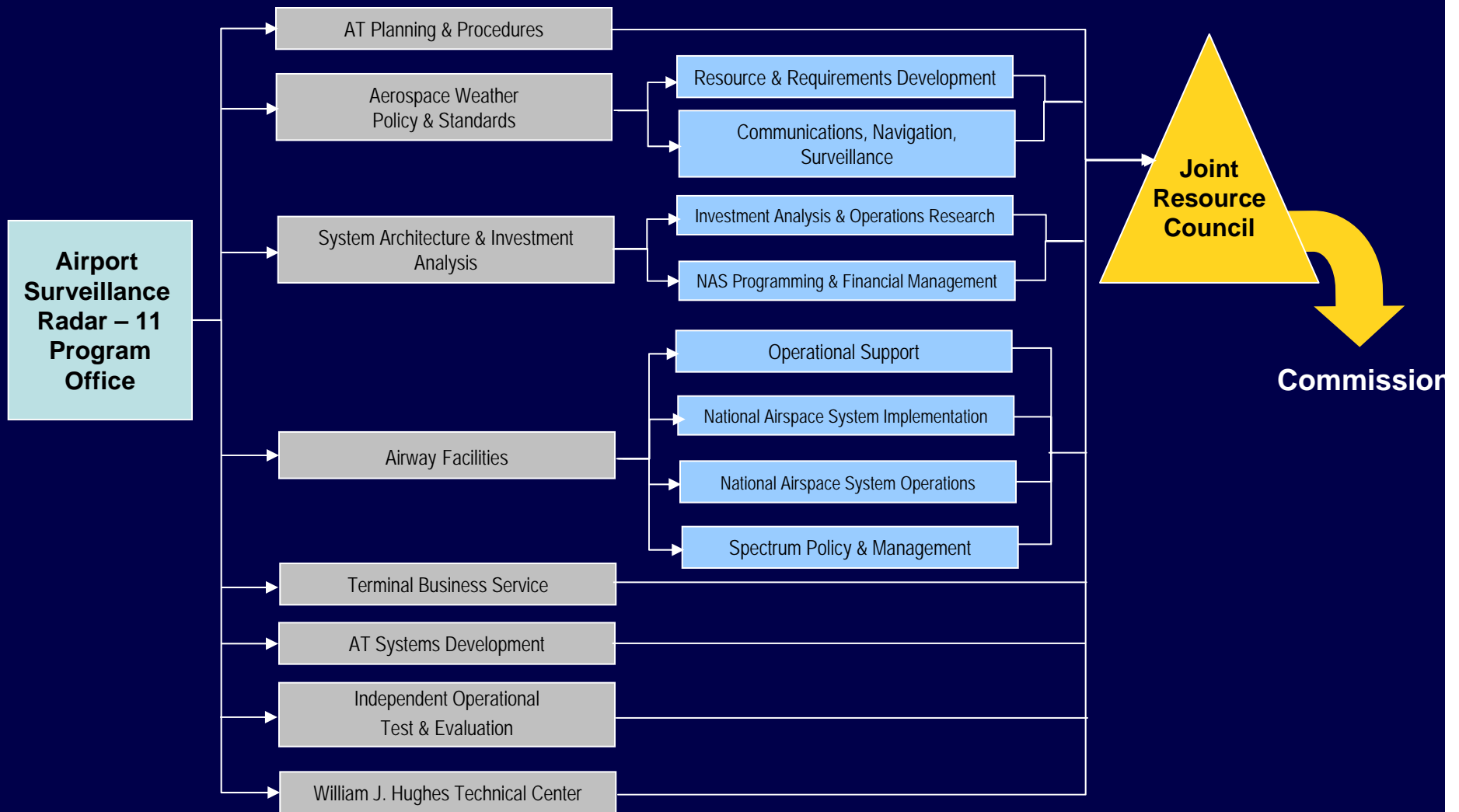
- Clear standards and allocation of accountability reduces non-aligned motives to revisit decisions and subvert the decision-making process.

➤ ***Selling New Technology to the Field Operation (Human Factors)***

- Acquisition and implementation managers are both rewarded for same performance (service value improvement)

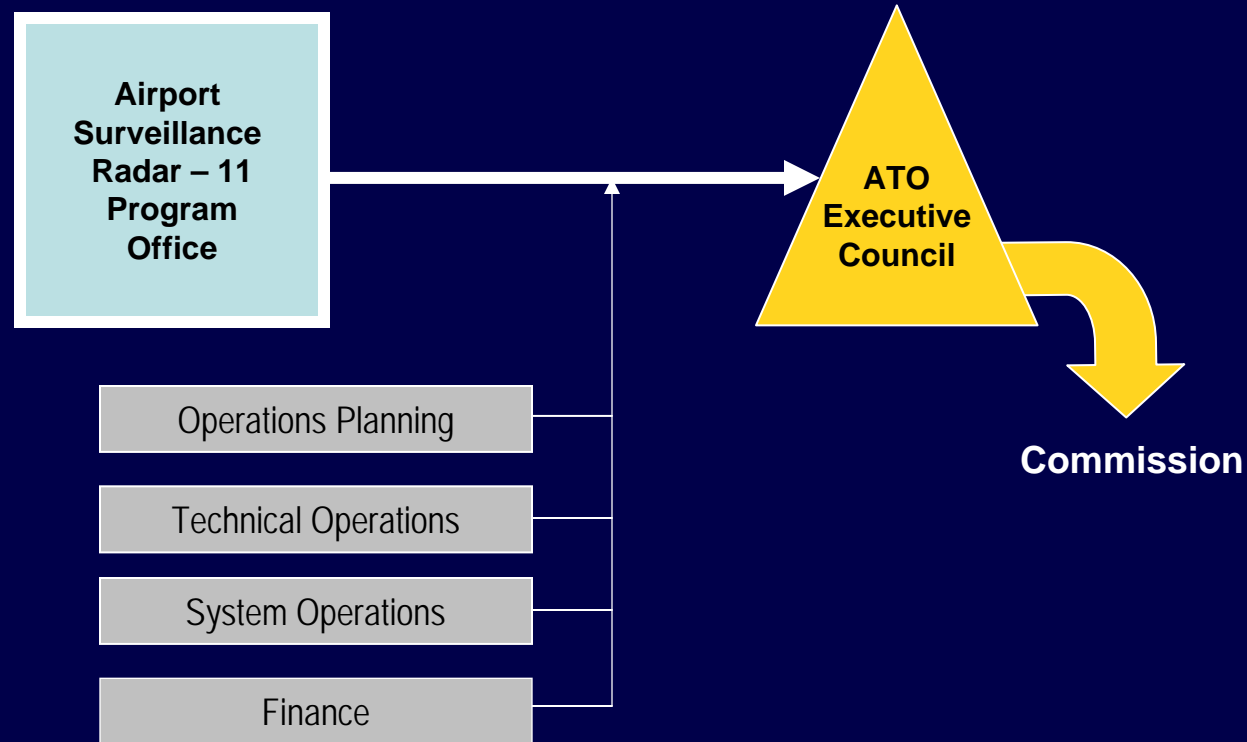
Existing Acquisition Process

Distributed, Multiple Decision Paths



Future Acquisition Process

Aligned Linear Decision Path



Initial Assessment

Financial



Air Traffic Organization

- Financial statements and reporting processes are needed to provide the operation with transparency in developing goals and focus.
- Budget and spending authority need to be aligned to achieve cost awareness and accountability, and needs to be pushed down to the facility level.
- Business management training is needed for managers so they can understand their business problems and develop solutions.
- Capital investments and future operating expenses are not strongly linked or projected with fidelity, so investment outcome is not validated against performance metrics that measure service value improvement.
- Depreciation expense needs to be incorporated into total unit cost so that real costs can be understood, estimated, and controlled in operations planning.
- Transfer pricing mechanisms are needed for shared services among business units to better understand and control infrastructure costs.

Initial Assessment

Operational



Air Traffic Organization

- Top operations management must be more closely linked with day-to-day operations problems in the field.
- Internal and external communication capabilities must be strengthened to improve organizational leadership and coordination.
- Clear and simple business metrics and discipline are needed to help managers overcome myopia on operational complexities.
- Massive amounts of data and metrics need to be converted into usable business management information.
- Detailed operational planning processes and goals

Initial Assessment

Technology



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- Total cost of ownership is unknown for past technology investments.
- Although a 20 year life cycle is plan standard, failure to track annual total cost with depreciation leads to inability to plan for funding of technical refresh requirements.
- Lack of cash flow planning for technical refresh results in service life extensions for up to another 20+ years at higher unit operating costs.
- Capital investments do not include Return on Investment (ROI) validation during testing or after deployment.
- O&M funding shortfalls inhibit new NAS tools and technology handoffs from F&E.
- O&M funding shortfalls have been mitigated by delaying some F&E programs (indirectly, e.g., URET).

Initial Assessment

Institutional



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- Clear distinction between the FAA “regulatory division” and the FAA “service division” (ATO) is needed to drive performance.
- The intensely hierarchical, risk averse, reactionary management culture will need to be changed to a results-focused, proactive and innovative behavior. The decades of cultural bias will require rapid and visible short term progress to ensure perpetuity, because it takes at least 3 to 5 years for the changes to become institutionalized.
- The operation’s service-based financial, technical, and other institutional needs require a very different focus than regulation-based departments.
- Institutional safety improvements requires better accountability for results through a better defined process for managing safety.
- A separate FAA safety oversight outside ATO will be needed.
- Operations planning will need convergence with the new FAA Flight

Initial Assessment

Political



Air Traffic Organization

- The budgeting and appropriations funding process is program oriented and only indirectly related to service value or performance-based planning.
- Special owner-requested appropriations priorities will be more transparent in ATO's financial statements.

Basic Organizational Dynamics



Air Traffic Organization

Communications

- **People**
 - Execute: Right People, Right Position, Right Time
- **Proximity**
 - More Effective Matrix Management
- **Priorities**
 - Aligned Financial and Political Strategies
- **Process**
 - Based on Performance Goals and Processes
- **Purpose**
 - Influence of Organization and Structure

ATO Management Guidelines



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➤ *Honesty*

- There should never be any question that we're telling the truth.

➤ *Integrity*

- There should never be any question of our intent to do the right thing.

➤ *Transparency*

- There should never be any question why we're doing what we're doing.