Integrating Strategic and Facility Planning

Society for Healthcare Strategy and Market Development

2007 Annual Educational Conference

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Agenda

- Context for integrating
- Traditional approaches
- Conceptual framework
- A case study – Prince William Health System

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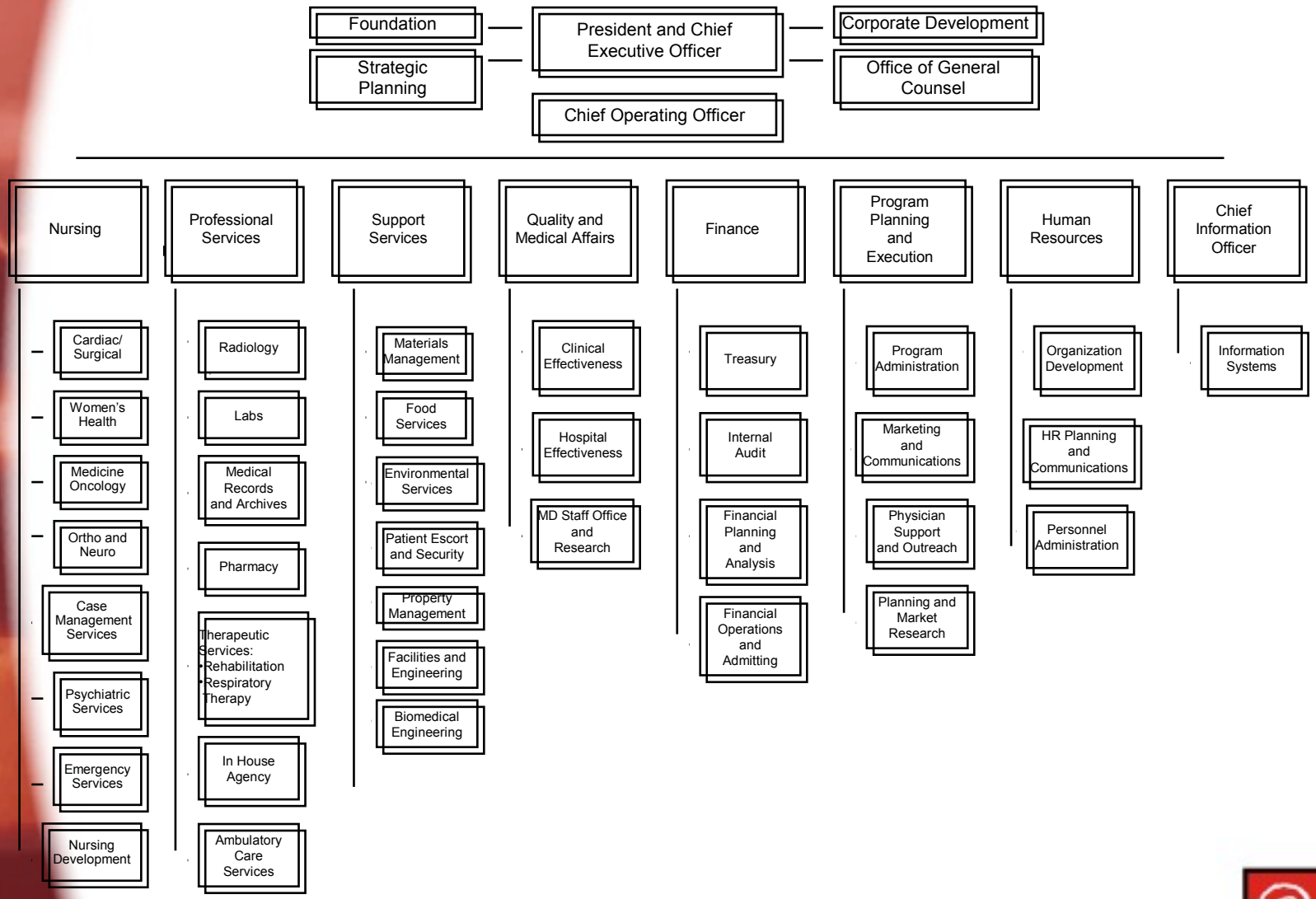
The Argument for an Integrated Approach

Why Build?	Strategic Questions
Aging Facility	•What is delivery system vision? •Do we maintain current location(s)?
Operational Efficiency	•What is future operating model? •Efficient for whom?
Technological Advances	•Are we leading edge or fast followers?
Consumer Demands	•How much are consumers driving decisions in our market?
Population/Demographics	•How does age mix affect needs? •How does cultural mix affect design/space?
Competition/Market Share	•How will we differentiate ourselves?

Dis-integrated Organizations….



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…Lead to Dis-integrated Processes

- **Strategy**
  - Driven by market forces
  - Customers – consumers, physicians
  - Priorities – market share, quality
- **Facilities**
  - Driven by internal demands
  - Customers – staff, physicians?
  - Priorities – safety, efficiency

Dis-integrated Approaches

- Field of dreams
- Design by Modern Healthcare
- Squeaky wheel
- Supply side strategy
- Old assumptions – new realities

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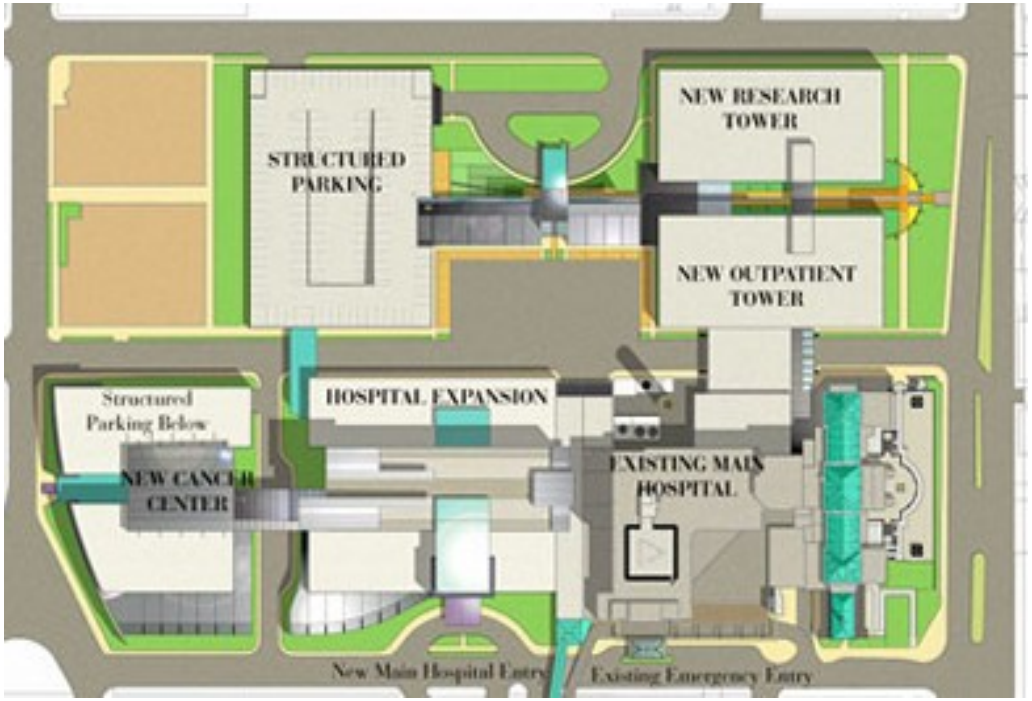
Squeaky Wheels

Structured Parking

Hospital Expansion

New Cancer Center

New Main Entry



New Research Tower

New Outpatient Tower

Existing Main Hospital

Existing ED Entry

1954
Central Baptist Hospital opened with 173 beds

1957
Opened ICU

1965
Added 65-beds and new ED

1972
Added 70-beds

1974
Purchased professional building

1984
Completed 60,000-square-foot office building

1985
Added 73-acute care beds

1991
Constructed a new professional office building

1997
Established first comprehensive women's center in Lexington

2002
Opened a 240,000 -square-foot medical facility

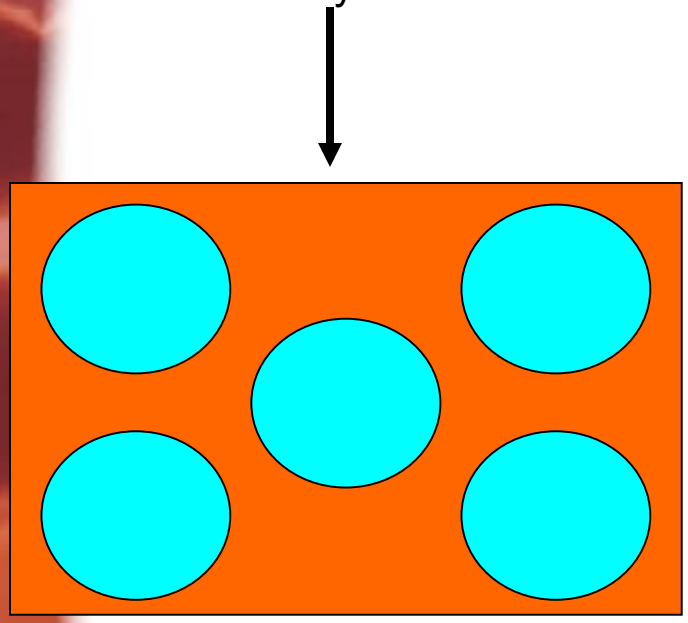
2002
Announced plans for new women and children's hospital

Supply Side

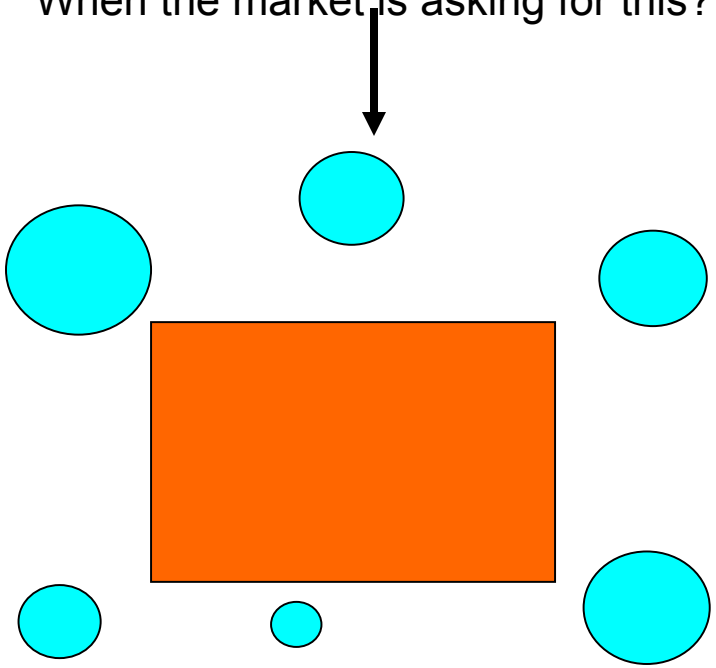
- **Designs for staff and physicians have brought us:**
  - **Semiprivate rooms**
  - **Open treatment bays**
  - **Mixed in and outpatient**
  - **Centralized services, hub and spoke**
- **While consumers increasingly seeking out:**
  - **Privacy**
  - **Convenience**

Supply Side – Outpatient Services

How many still have this?



When the market is asking for this?



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Old Assumptions – New Realities

- **Old assumption: *women drive healthcare decisions***
  - Hospital A spent $10M+ to expand/enhance L&D facility
- **New realities: *loss leaders can be merely losses***
  - High Medicaid ob; unable to attract paying patients
  - Financial loss from women's center limited ability to expand elsewhere
  - Shelved necessary ED expansion and bed tower renovation
  - Financial challenges continue

Premise

- ***Strategic planning and facilities development are completely interdependent.***

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The Conceptual Framework

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“Form follows function…”

-- Louis Sullivan

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NASA

- Discovered that ballpoint pens would not work in zero gravity
- Took over a decade and spent $12 billion to develop a pen that:
  - writes in zero gravity,
  - upside down,
  - under water,
  - on almost any surface including glass and at temperatures ranging from below freezing to 300C.

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Form Follows Function
Leading Questions

- **What is the problem?**
  - **Old facility in and of itself is not a problem**
- **What is measure of success?**
  - **Is a new building a sign of success?**
  - **Or, is success measured in satisfaction, market share, cost?**

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The Congested ED Case

- Major Medical Center
- 100,000+ ED visits
- 4- 6 hour average wait time
- 12% LWBS

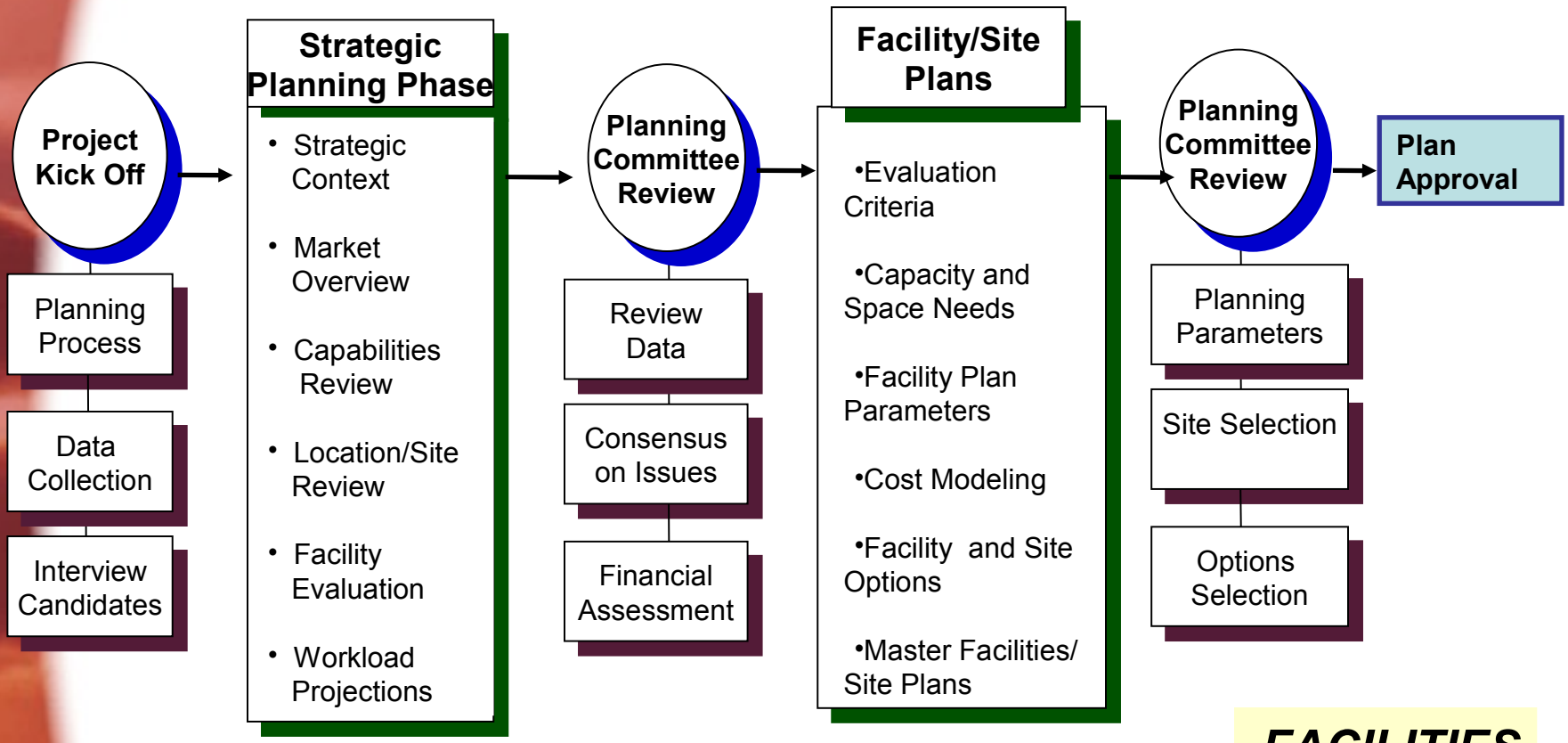
The Congested ED – Strategic Options

- Improve throughput
- Expand
- Divide
- Move off campus
- Others?

Decision drivers:

- ✓ Capital cost
- ✓ Operating cost
- ✓ Market share/volume impact
- ✓ Physician implications
- ✓ Space/facility needs
- ✓ Other?

The Integrated Process



STRATEGY (Function)

FACILITIES (Form)

An Inclusive Process

- **Decision Makers**
  - Board
  - Executive Team
- **Stakeholders**
  - Physicians
  - Staff
  - Patients
- **Support**
  - Planning
  - Finance
  - Engineering/Facilities
  - Dept management

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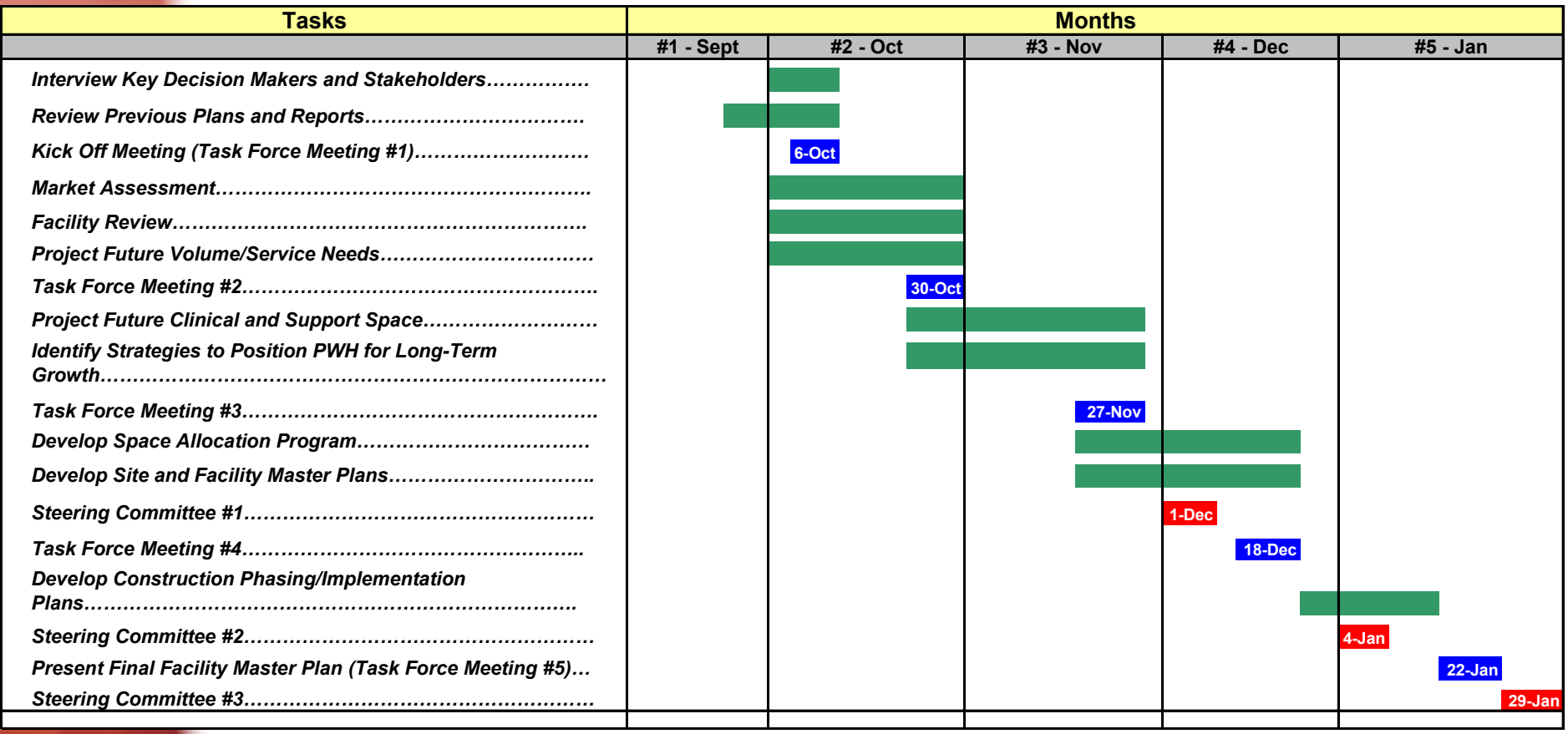
Multiple Overlapping Tasks



Task Force Meeting

Steering Committee Meeting

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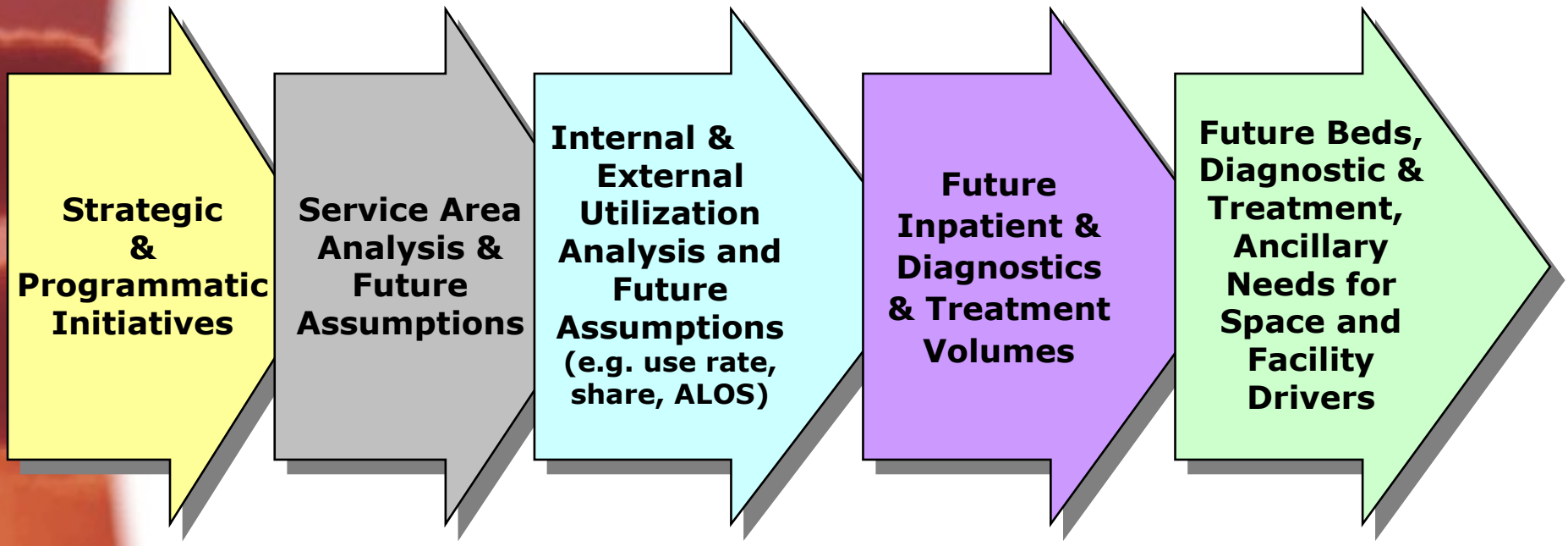
Strategic Planning Phase



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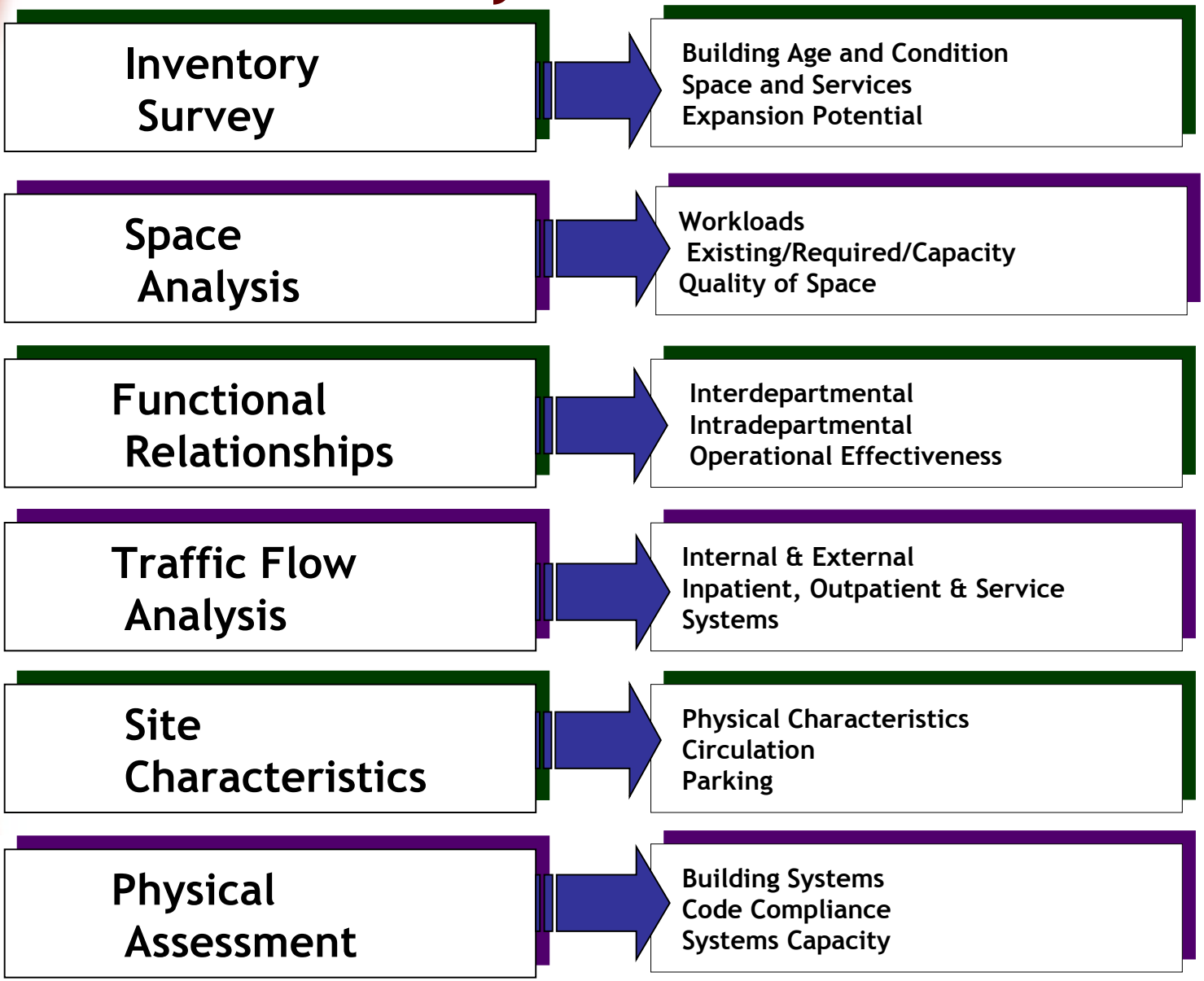
Facility Evaluation



Volume Drivers

Key National Trends	Local Impact
Aging Population	How will LOS be affected? What should be done to better manage chronic medical conditions like diabetes? What about the need for other settings such as home health?
Increasing Consumerism	How to gear up for a more "retail" oriented market?
Shortage of Providers	Can new beds/ programs be staffed? What new approaches to recruitment/retention should we consider?
Escalating Competition	What can we do to differentiate and compete more effectively?
More Aggressive Payers	Will we be able to continue to command premium reimbursement rates?
Advances in Technology	What is our strategy with regard to technology adoption?
Rising Uninsured / Underinsured	Are there initiatives that should be considered to mitigate this development?

Prince William Health System
Integrated Master Facility Plan

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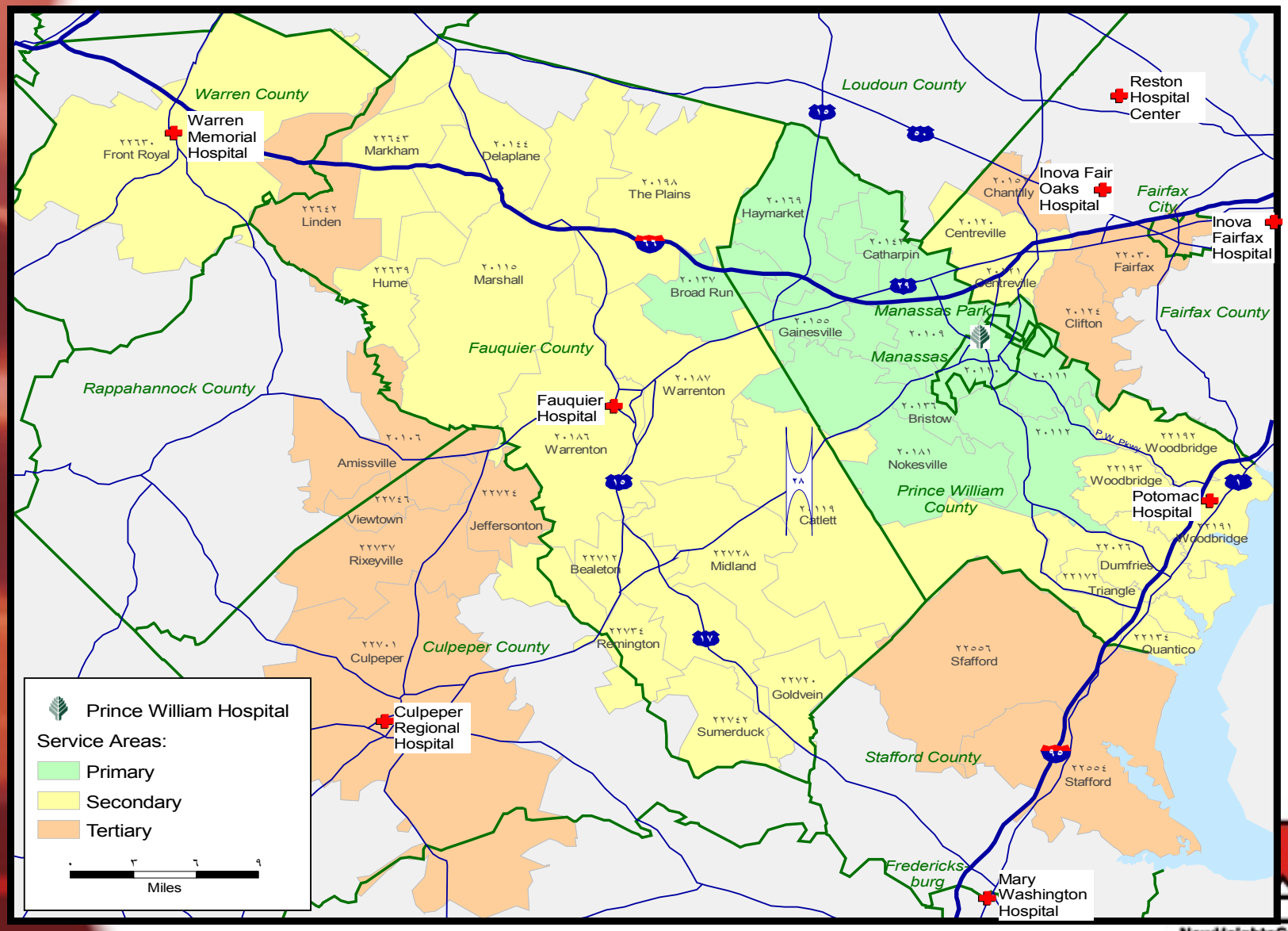
Overview

- Opened in 1964
- Licensed for 170 beds, operating 153 beds
- Outpatient services are 75% of revenues
- One of only two hospitals serving 2nd fastest growing county in Northern VA
- Ad hoc expansions over the years
- Most recent: new birthing center, emergency room, ambulatory surgery center, and inpatient surgery

Service Area



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Master Plan – Problem Definition

- **How to address:**
  - **Significant population growth in community**
  - **Patient outmigration**

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Master Plan Questions

- What is the future demand for services in light of demographic trends and the continual shift toward outpatient care?
- How do we most effectively use multiple sites?
- How do we maximize current facilities through operational changes?
- How do we develop adequate flexibility in the facility to accommodate anticipated and unanticipated changes in healthcare delivery?

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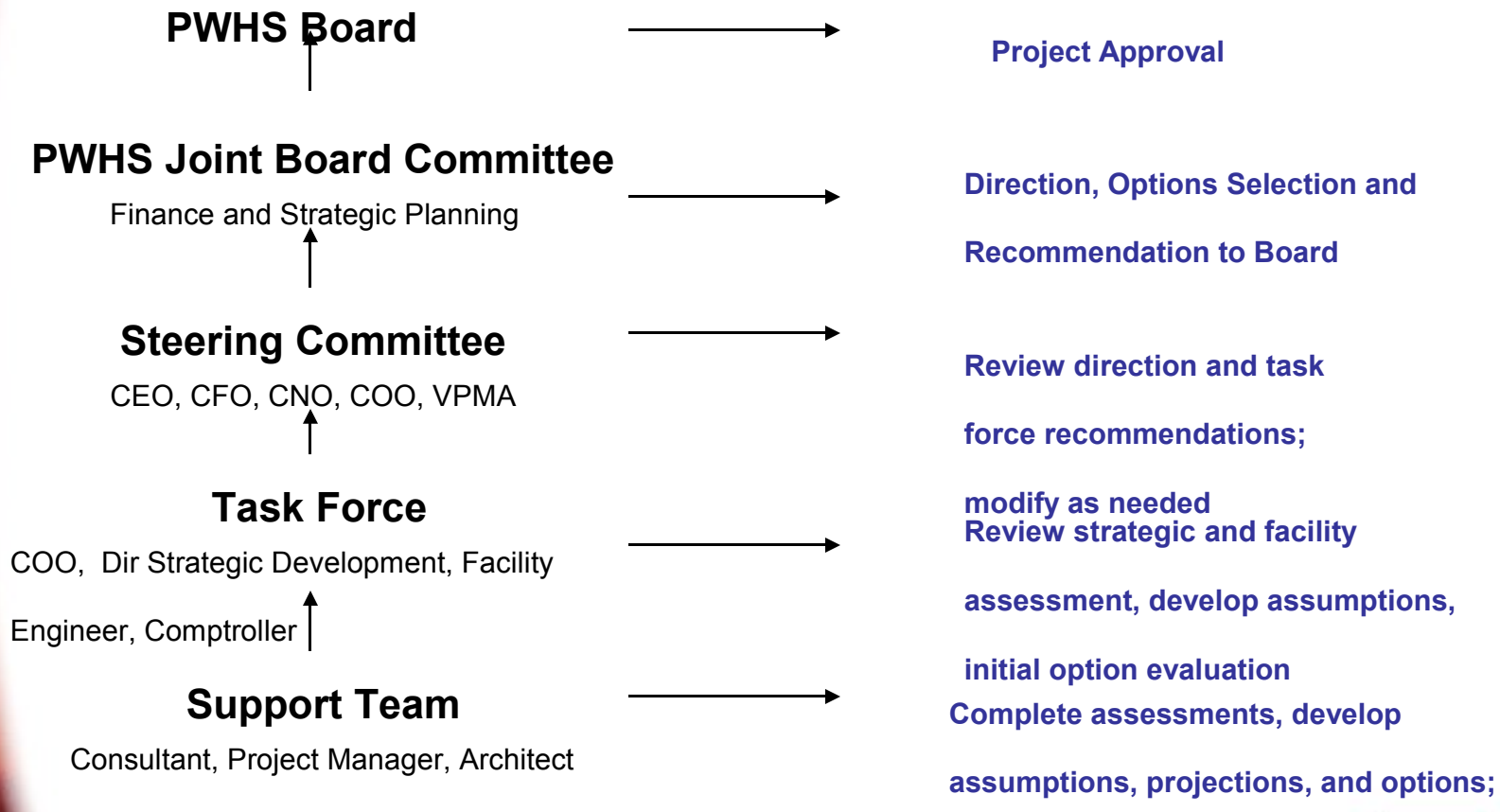
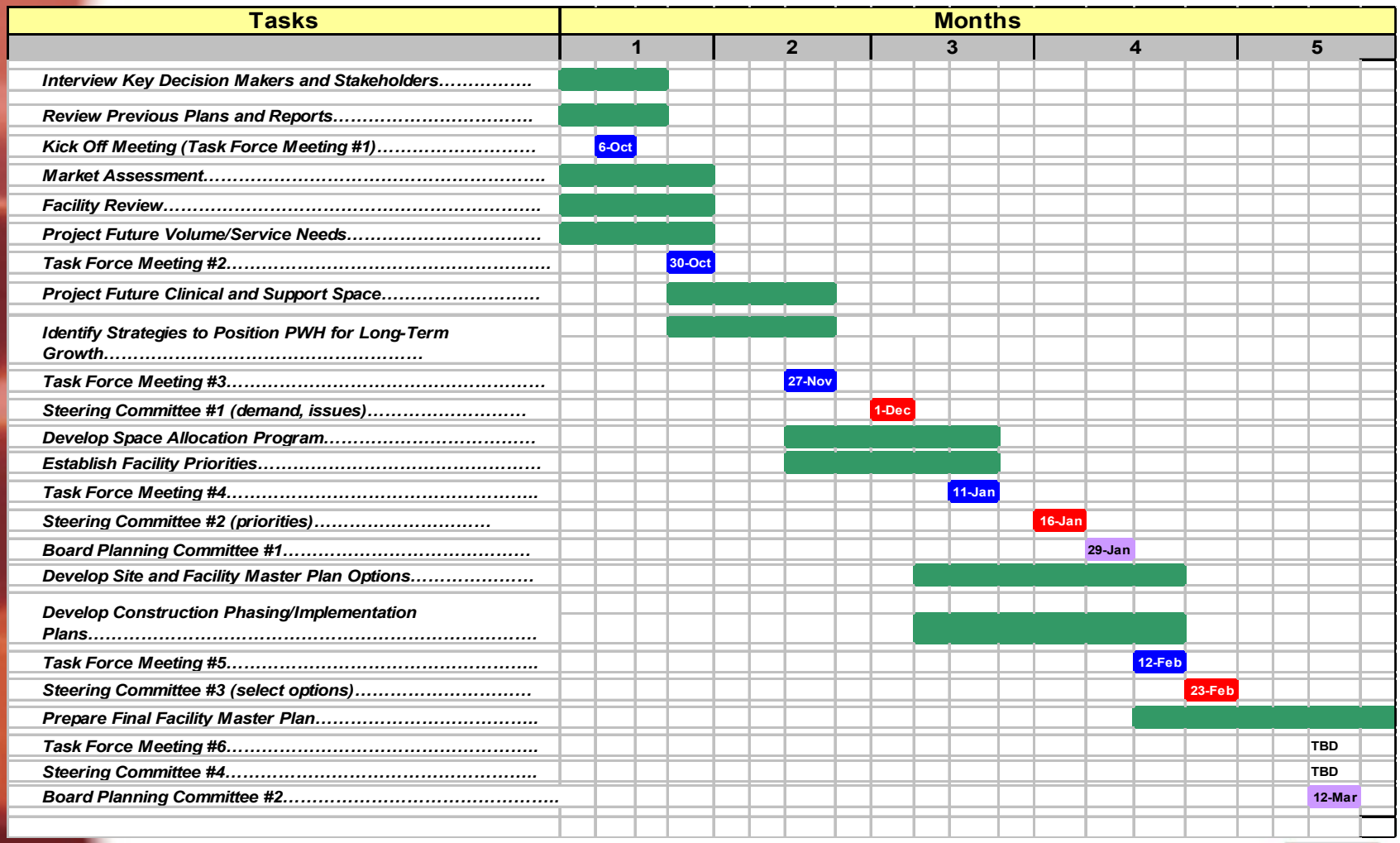
Process Organization



Process Overview



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Phase I - Confirming Future Needs and Challenges

- **Strategic Assessment**
- **Facility Evaluation**
- **Volume Projections**
- **Space Needs – Current and Future**

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Significant Population Growth Challenging Capacity

	2005	2010	2015	2020	% Change 2005-2020
Two Campus					
Haymarket					
PSA	31,554	44,057	53,590	66,157	*110%*
SSA	48,206	54,946	62,237	71,026	*47%*
Subtotal	79,760	99,003	115,827	137,183	*72%*
Manassas					
PSA	95,062	108,511	120,790	135,343	*42%*
SSA	255,497	295,155	327,358	359,562	*41%*
Subtotal	350,559	403,666	448,148	494,905	*41%*
Shared Service Area					
Subtotal	123,081	141,486	162,393	187,233	*52%*
Uncounted Non-resident					
Subtotal	6,000	6,868	7,639	8,519	*42%*
Total	**559,400**	**651,023**	**734,007**	**827,839**	***48%***
System PSA Total	***189,232***	***229,670***	***265,661***	***311,003***	***64%***

The combined System PSA pop will increase 64% from 2005 to 2020, from 189,232 to 311,003

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Inpatient Market will Double in 15 Years

Market Size (Discharges)			
Bed Type	**2005**	**2015**	**2020**
Med/Surg	8,406	14,783	18,524
Obstetrics	3,761	4,740	5,106
Peds	1,250	1,713	1,919
Psych	771	1,151	1,368
Total	**14,188**	**22,386**	**26,917**

Value of 1 Market Share Point (Discharges)			
Bed Type	**2005**	**2015**	**2020**
Med/Surg	84	148	185
Obstetrics	38	47	51
Peds	13	17	19
Psych	8	12	14
Total	**142**	**224**	**269**

Perception of Overcapacity vs Reality

BED OCCUPANCY BY UNIT

	2006 Annualized			
Bed/Unit Type	Patient Days	ADC	Beds	Occupancy
CCU	1,359	3.7	11	33.8%
PCU	8,480	23.2	26	**89.4%**
Med/Surg	9,720	26.6	32	**83.2%**
Oncology	1,659	4.5	6	75.8%
Ortho	755	2.1	5	41.3%
Pediatrics	1,154	3.2	14	22.6%
OB	6,813	18.7	32	58.3%
LDR	57	0.2		
NICU	2,195	6.0	10	60.1%
Nursery	1,817	5.0		
Psych	8,841	24.2	32	75.7%
ED	80	0.2		
	42,927	**117.6**	**168**	**70.0%**

Excludes normal newborns (DRG 391)

Normalizing Utilization to Allocate Beds By Unit

PATIENT DAYS BY UNIT VS. ACUITY

	2006 Annualized		Appropriate Distribution by Acuity - 2006		Projected Distribution by Acuity - 2015		Projected Distribution by Acuity - 2020	
Bed/Unit Type	Patient Days	%	Patient Days	%	Patient Days	%	Patient Days	%
CCU	1359	6.2%	2327	8.5%	2936	9.5%	3735	10.0%
PCU	8480	38.6%	3942	14.3%	4432	14.3%	5356	14.3%
Med-Surg	9720	55.2%	21215	77.2%	23535	76.2%	28255	75.7%
Oncology (Med-Surg)	1659							
Ortho (Med/Surg)	755							
	21973	100.0%	27483	100.0%	30903	100.0%	37345	100.0%

Excludes Psych, OB, NICU, Pediatrics

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Key Facility Issues

- **Patient rooms/units**
  - **Lack of private rooms**
  - **Critical care outdated and too small**
  - **Smaller units fragmented, inefficient, in older buildings**
  - **Insufficient capacity for growth**
  - **Obstetrics – triage and observation/testing space**

- **Ancillaries**
  - **Scattered Imaging and Diagnostics**
  - **Pharmacy –space and poor**
  - **Rehabilitation – access**
  - **Outpatient access**

Key Facility Issues

- **Support**
  - **Dietary/Cafeteria – undersized and lacks visibility**
  - **Materiel Management – logistics with ASC**
  - **Scattered HIM functions**
  - **Loading Dock and receiving/holding areas**
  - **Lack of “backfill” strategy as departments have moved**

- **Other Buildings**

Manassas Bed Need – Select Services

	2005	2015	2020	% Change 2005-2020
Critical Care	11	13	16	5
Progressive Care	26	15	18	-8
Medical Surgical	48	76	92	44
Pediatrics	14	6	8	-6

Priority Setting

Strategic Assumptions

- **Population driving growth, on one or two campuses**
- **Increase in market share will result in increases in patient acuity and length of stay**
- **Current medical staff not enough to manage population growth**

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Strategic Assumptions

- No strong argument for centralizing services on one campus
- Increase in outpatient growth due to technology and market share gains
- ED growth rate to continue

Board Expectations - Priority Projects

- Cardiac Cath
- Additional Bed Capacity
- Imaging
- Hospital Redevelopment
- Information Systems
- Off Site Facilities
- Infrastructure
- Parking Garage
- Second Campus
- Critical Care

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Facility Priorities
From Master Plan Assessment

- Critical care
- Med/surg beds – both additional and conversion to private
- Imaging
- Pharmacy
- Parking
- Infrastructure

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Projects Priority Evaluation Grid

	Demand	Timing	Effect on Other Facility Projects	Effect on Market Share	Physician Support	Community Support	Total Score	Weighted Score
Second Campus								
Cardiac Cath								
Critical Care								
Bed Capacity								
Hospital Redevelopment, ١st Floor								
Hospital Redevelopment, ٢nd Floor								
Imaging								
Information Systems								
Infrastructure								
Off Site Facilities								

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Projects Prioritized

- **Second campus**
- **Cardiac Cath**
- **Critical Care**
- **Bed Capacity**
  - Hospital Redevelopment, 1st Floor
  - Hospital Redevelopment, 2nd Floor
  - Imaging
- **Others TBD**
  - Information Systems
  - Infrastructure
  - Parking Garage
  - Caton Merchant House

Master Plan Direction
From Joint Strategic Planning and Finance Committees

- **Maximize the number of private rooms possible**
- **Address outpatient services**
- **Maximize utilization/redevelopment of existing space vs. new construction where possible**
- **Phase to generate ROI to support further capital investments needed**

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Evaluating Options

Options Discussion

Board Expectations	Option A	Option B
Private Beds (Med/Surg)		
Critical Care		
Cardiac Cath		
Imaging		
Hospital Redevelopment-		
Parking		
Infrastructure		
Cost		

Advantages/Disadvantages

	Advantages	Disadvantages
Option A	•Gain clinical efficiencies by maintaining patient floors directly above diagnostic and treatment areas •Less fragmentation of inpatient units •Better utilization of existing available space •Potential to free capital for off campus development and 2nd campus	•Potential disruption to current units •Outpatient expanded but not consolidated
Option B	•Less disruption to units •Creates outpatient zone •Patient tower consistent with original discussions	•Inpatient services fragmented •Cost •Greater square footage; not necessarily needed

Plan Challenges

- **Strategic assumptions required considerable culture change**
- **Expectations vs. realities**
  - **Prices increase daily: sticker shock**
  - **Priories important; can't do it all today**
- **Medical staff support**
- **Board commitment**

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Questions?

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