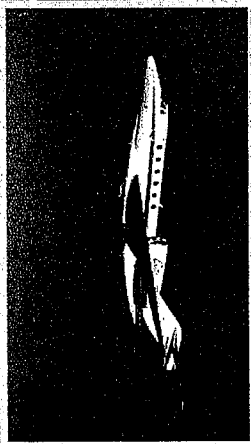
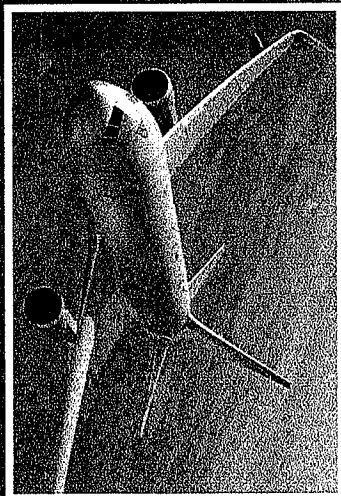
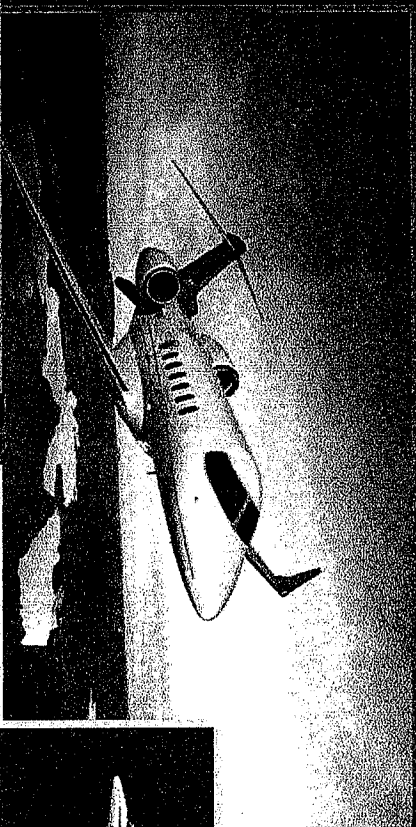
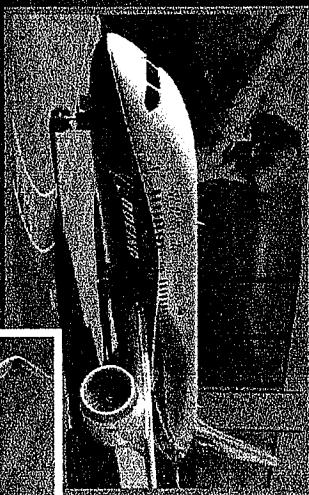


Kansas Aviation Industry: Economic Outlook and Our Future

John Dieker

Vice President Operations
Bombardier Learjet



Appropriations Committee

Date February 4, 2011

Attachment 3

Preparing for Alternate Futures

UP

- Stable global economy
- Consumer confidence increasing in emerging markets
- Increasing civil transportation production rates
- Anticipated corporate profit rebound
- Global air travel improving
- Orders for large biz jets increasing

DOWN

- Potential geo-political disruption
- Increasing deflation potential
- U.S. unemployment remains high
- Used biz jet inventory too high
- Sovereign debt crisis

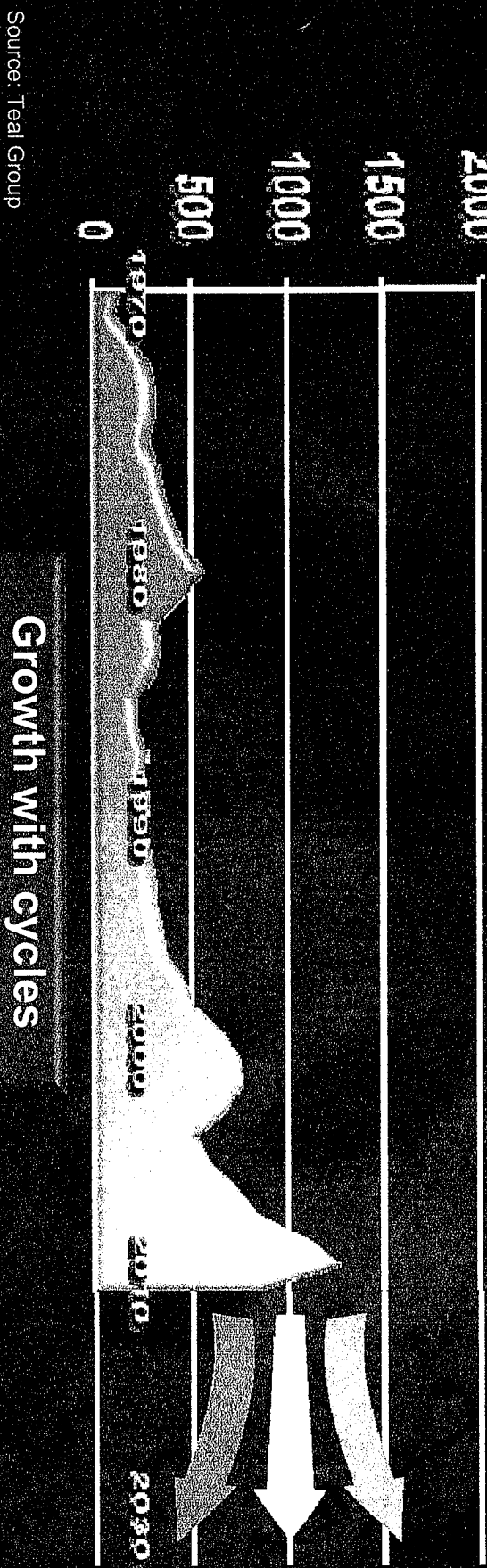
FLAT

- Credit still tight
- Stagnant U.S. capital investment
- U.S. Consumer confidence flat/declining

Appropriations Committee
Date February 4, 2011
Attachment 3-2

Aircraft Production

Civil Large Jet Transport

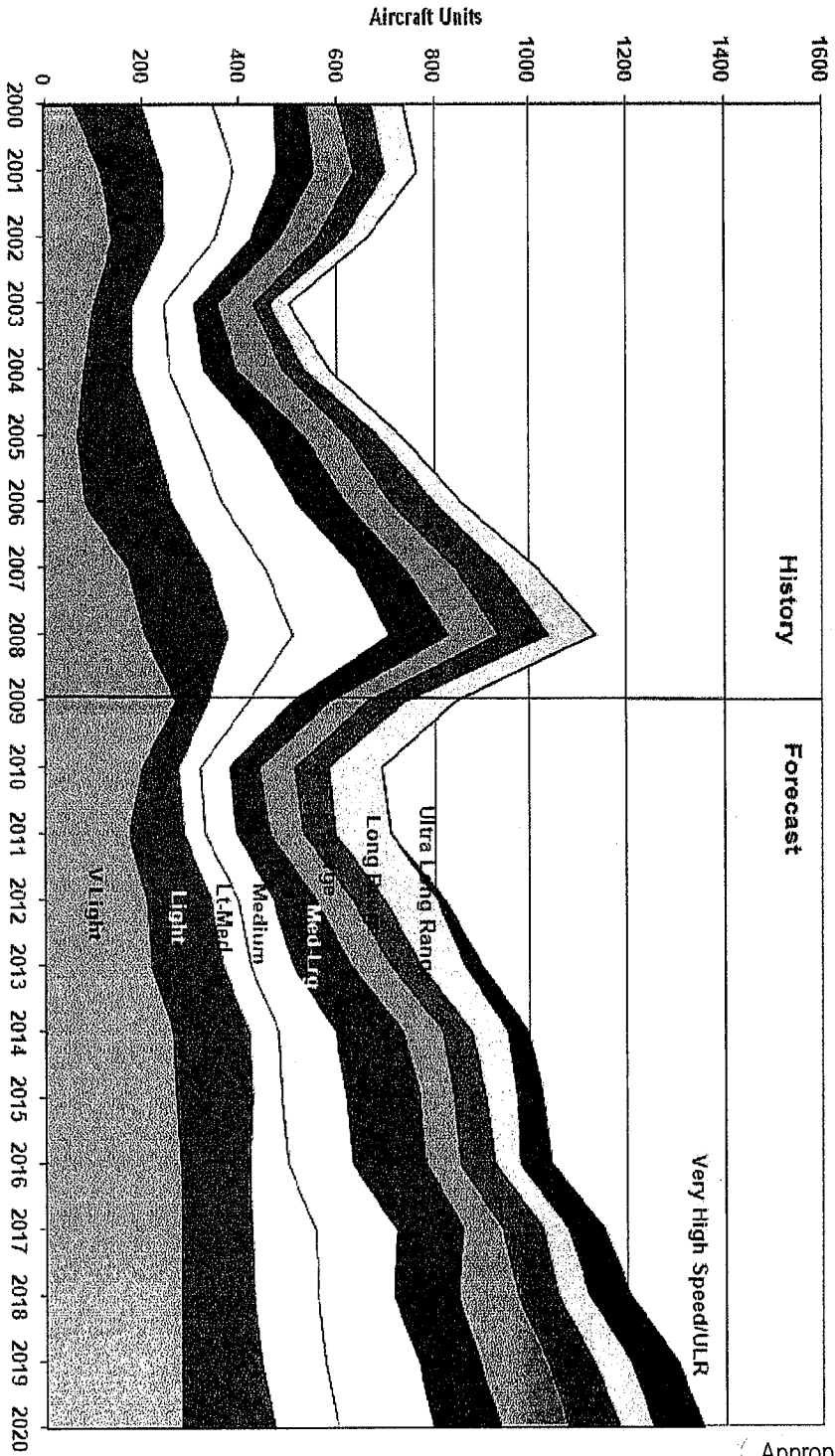


Growth with cycles

Appropriations Committee
 Date February 4, 2011
 Attachment 3-3

Industry Review and Outlook

Honeywell Business Jet Shipment Forecast



11,000 Aircraft from 2010 - 2020

Broad consensus on 2010 trough, slow climb and return to peak

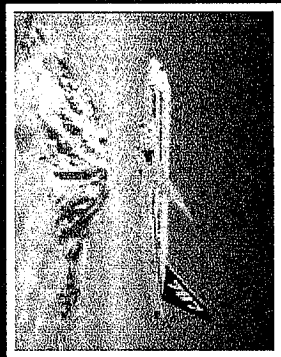
Source: Honeywell September 2010

Appropriations Committee

Date February 4, 2011

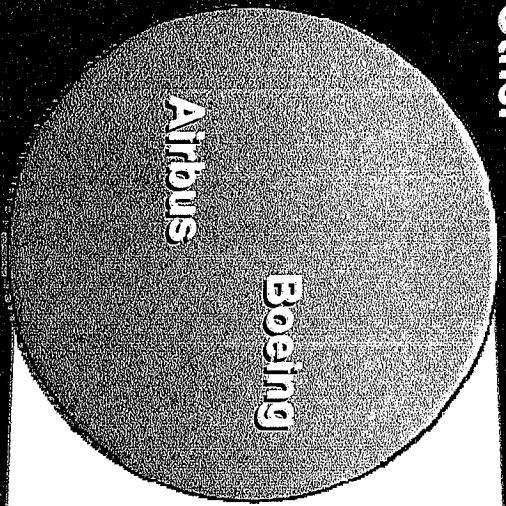
Attachment 3-4

Civil Jet Transport Market



Current

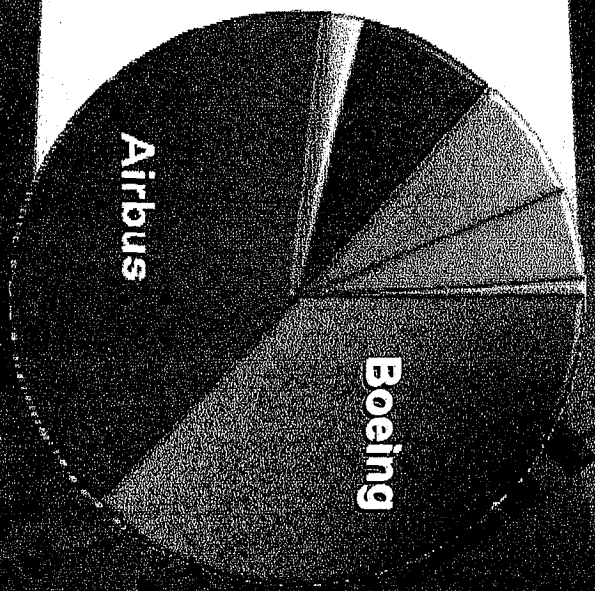
Other



1,100 Deliveries

2025

Other



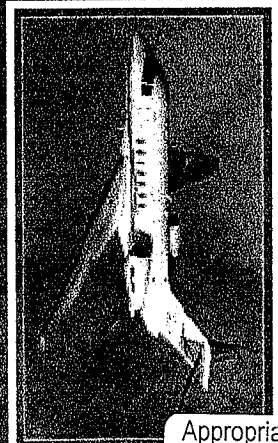
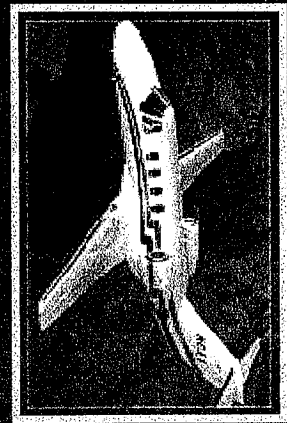
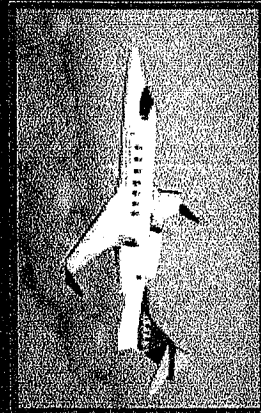
1,590 Deliveries

More players entering market

Sources: Spirit

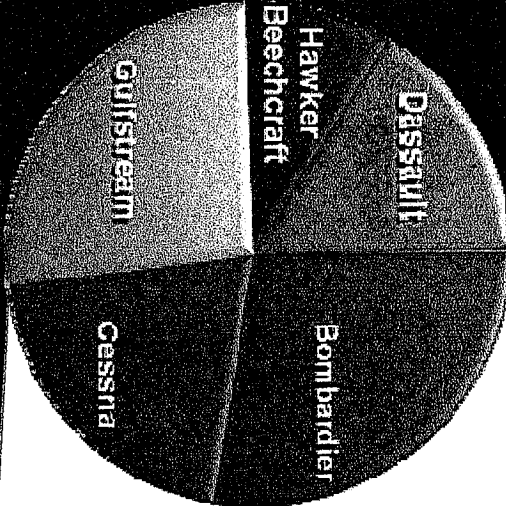
Appropriations Committee
 Date February 4, 2011
 Attachment 3-5

Business Jet Market

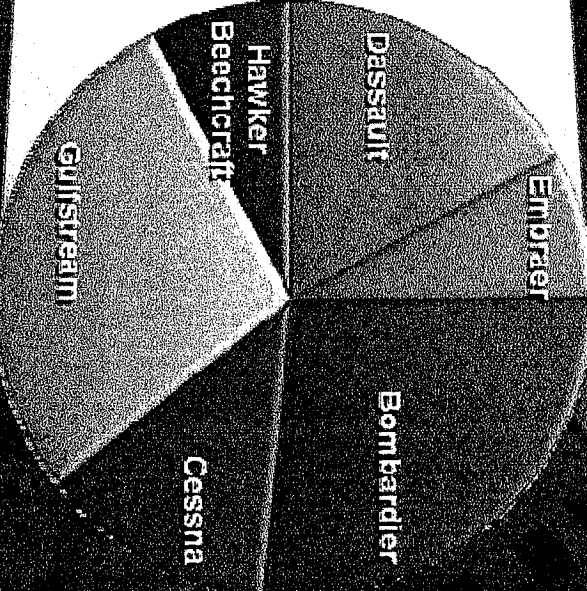


2000-2009

2010-2019



Embraer



7,889 Units

10,313 Units

Competition is growing globally

Sources: Teal

Appropriations Committee
 Date February 4, 2011
 Attachment 3-6

Kansas Aviation Industry Economic Impact

- Kansas contributions
 - ~\$7.1B annual economic impact, leading the nation with \$2,561 per capita contribution (twice that of the next most competitive state)
 - **Industry leading OEM's** such as Cessna, Bombardier Learjet, Hawker Beechcraft, Airbus (Engineering) and Boeing (Military)
 - Kansas GA OEM's shipped 1,708 airplanes worth **\$5.8B** with exports accounting for 537 airplanes or **\$2.3B (40%)**
 - Kansas aviation companies deliver over **50% of all GA aircraft** employing **17.8%** of all Kansas manufacturing employees
 - Each Kansas taxpayer saves **\$525** in taxes paid in Kansas as a result of the aviation industry
 - Each aviation job generates an additional **3.6 jobs**

Output, employment and earnings multiply

Appropriations Committee

Date February 4, 2011

Attachment 3-7

Kansas Aviation Industry Investment

THIS IS A GLOBAL COMPETITION!

Existing Global Aviation

Clusters:

- *South Central Kansas*
- Dallas-Fort Worth
- Montreal
- Puget Sound / Seattle
- Toulouse

Other Global Competitors:

- Brazil
- Mexico
- European Union
- Russia
- Japan
- China

“It is difficult to build an aviation cluster, but easy to destroy one.” - Richard Aboulafia, Teal Group

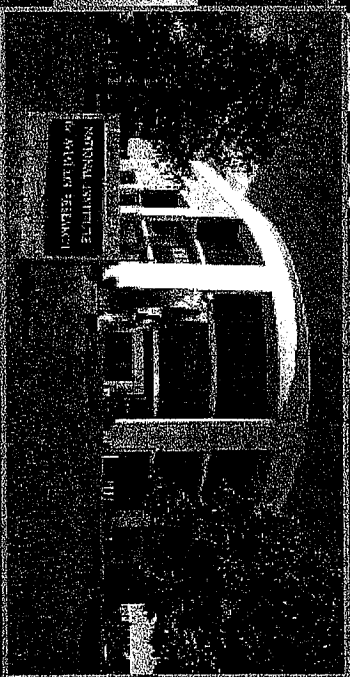
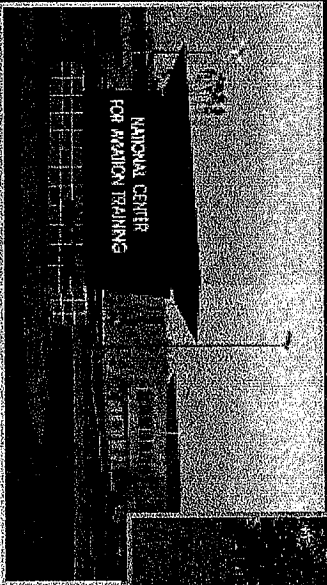
Appropriations Committee

Date February 4, 2011

Attachment 3-8

Sustaining our Competitive Advantage

- Increase Technology Integration / Research
- Grow and Maintain a Skilled Motivated Workforce
- Invest in Research & Training for the future
 - NIAR
 - NCAT



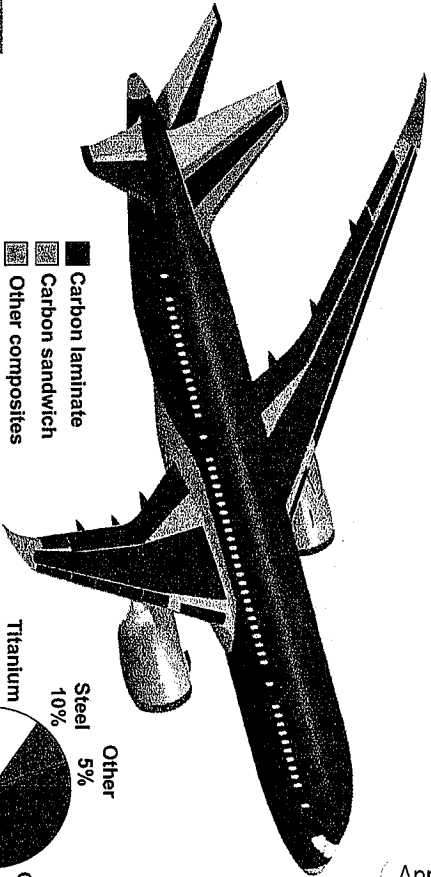
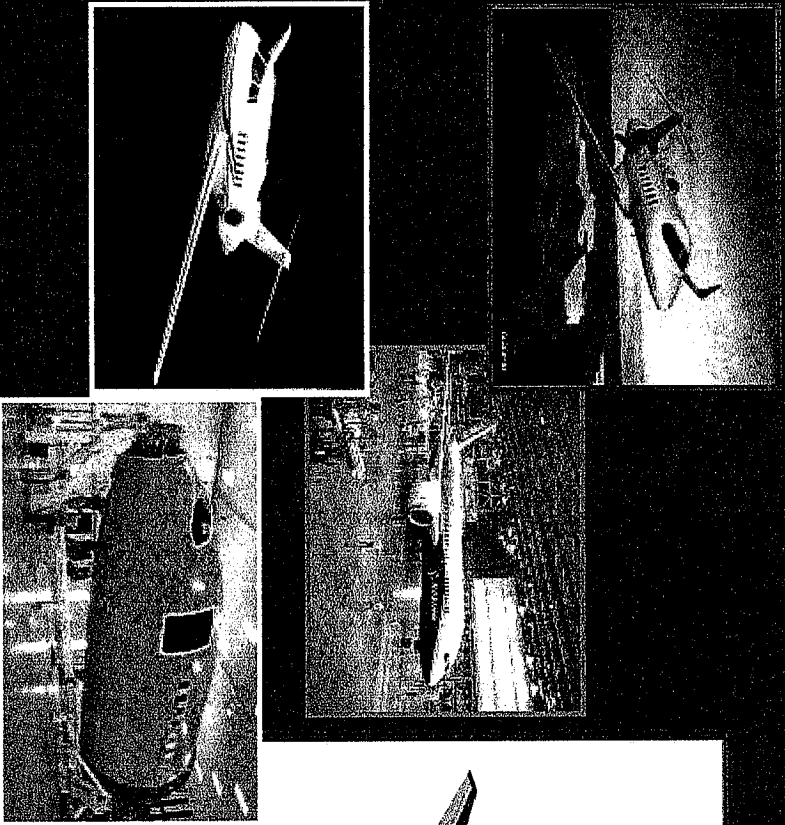
Appropriations Committee

Date February 4, 2011

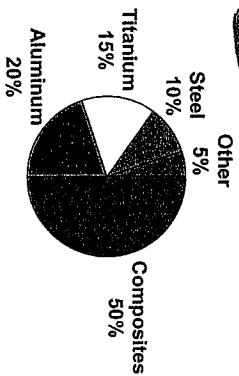
Attachment 3-9

Industry Need for Future Technology Investment

Airplane design and construction is changing rapidly



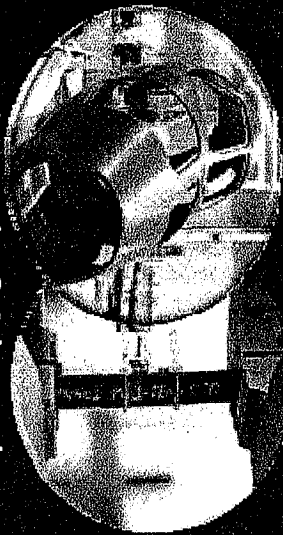
- Carbon laminate
- Carbon sandwich
- Other composites
- Aluminum
- Titanium



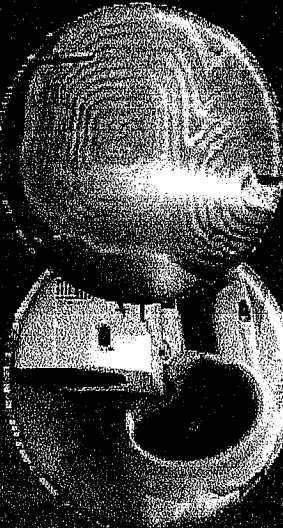
To maintain the leadership position and grow this market, we must invest.

Appropriations Committee
 Date February 4, 2011
 Attachment 3-10

Research Funding Distribution 2010 - 2011



Composite & Advanced
Materials Design 21.6%



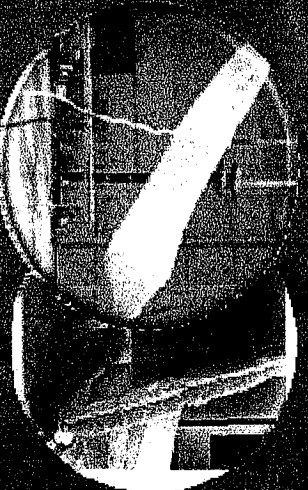
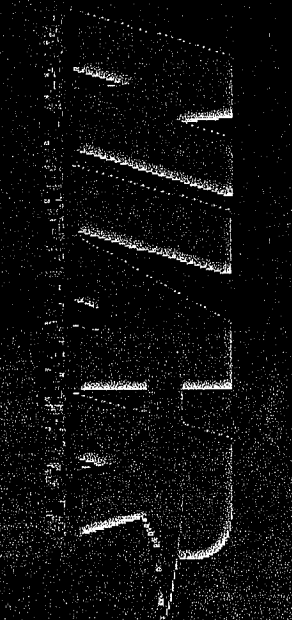
Composite & Advanced
Materials Repair 17.4%



Increased Performance &
Technology Integration 8.5%



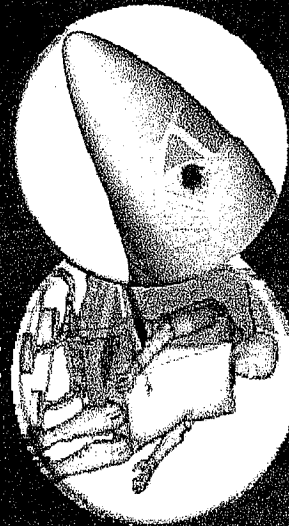
Advanced Joining 11.8%



Protection from Environmental
Effects 19%



Composite & Advanced Materials
Manufacturing 14.8%



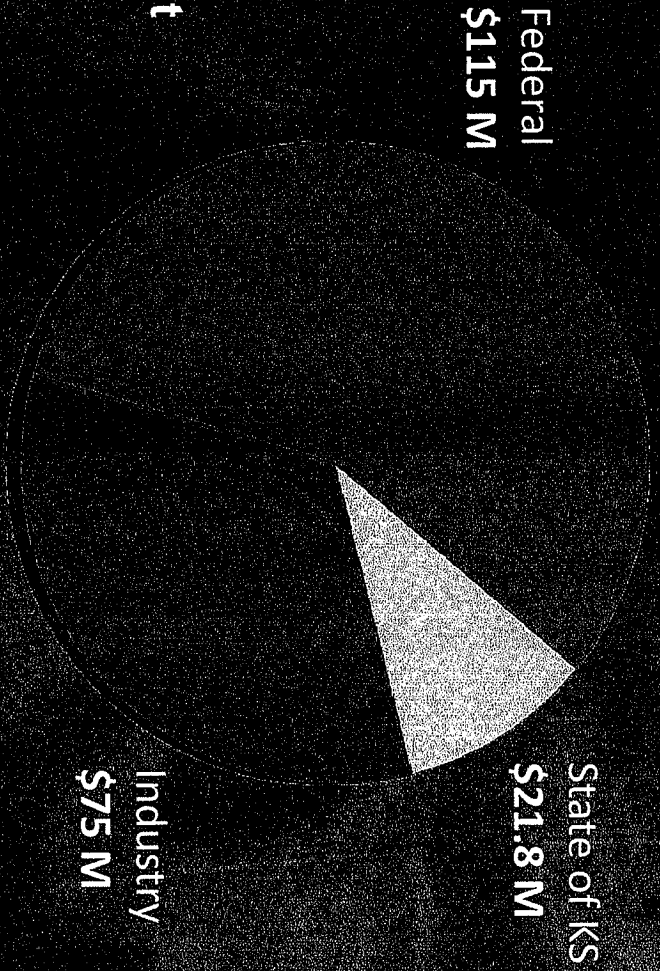
Simulation & Modeling
6.9%

Appropriations Committee
Date February 4, 2011
Attachment 3-11

NIAR Investments and Leverage

The State's investment has allowed us to leverage significant federal and industry funding into Kansas

Research Investments
2003-2010
\$211.8 Million



9:1
return
on investment

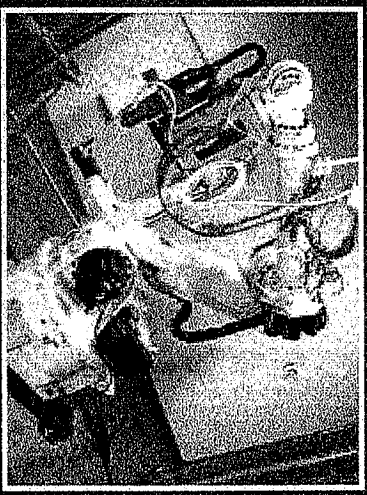
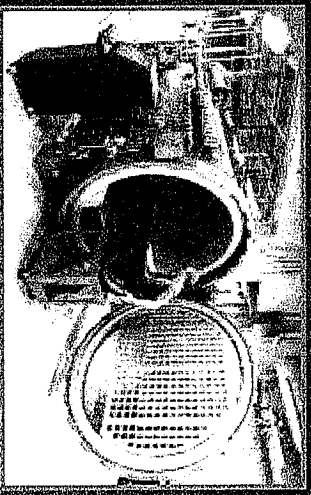
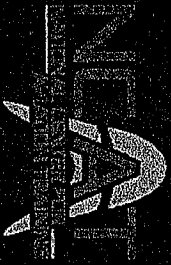
We need to continue to invest in the technology development for our future products.

Appropriations Committee
Date February 4, 2011
Attachment 3-12

National Center for Aviation Training

- County, City, State, Aviation Manufacturers, and Federal Partnership
- \$50M+ in facility invested
- Requires millions in infrastructure support (equipment, technology, infrastructure, curriculum & start-up)
- Manufacturing Tech Center & Aviation Training Center opened in Fall 2010

www.ncatkanssas.org



Appropriations Committee
Date February 4, 2011
Attachment 3-13

National Center for Aviation Training

Programs Launched or Planned for Launch in 2011

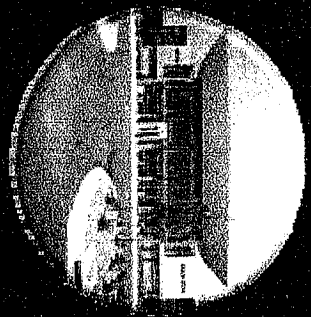
- Advanced Engineering
 - Manufacturing Engineering Design
 - CATIA
 - Design
 - Machining
 - Manufacturing Engineering Technician
 - Manufacturing Robotics Engineering
 - Industrial Engineering Technician
 - Quality Engineering Technician
 - Aeronautical Engineering Technician
- Mechanical Systems Technology
- Programmable Logic Controls Technician
- Nondestructive Testing
- Lean Manufacturing Process Technician
- Industrial Systems Technology
- Aerospace Quality Control
- Composite Technician
 - Fabrication Repair
- Aerospace Fiber Optics
- Project Management Certification
- Advancing Productivity, Innovation, and Competitive Success
- Six Sigma Certification

Appropriations Committee

Date February 4, 2011

Attachment 3-14

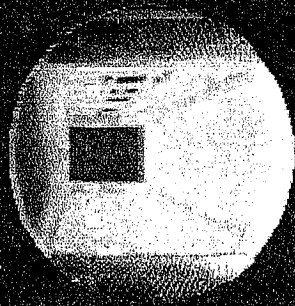
Equipment Funding Distribution 2010 - 2011



NCAT General
7%



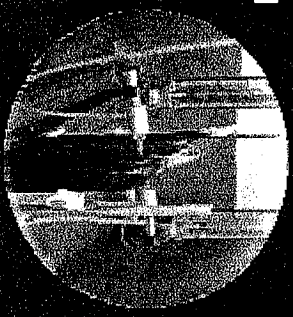
Airframe & Powerplant
39%



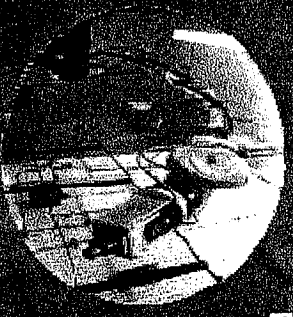
Paint Applications & Advanced
Coatings 12%



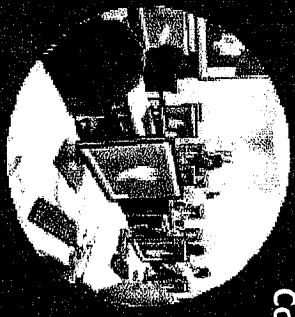
NDI 6%



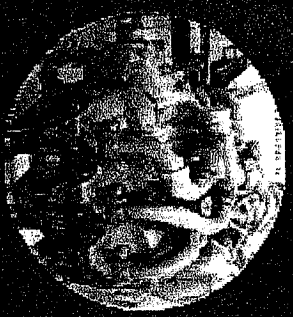
Composites 5%



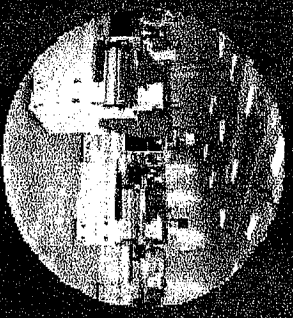
Robotics 8%



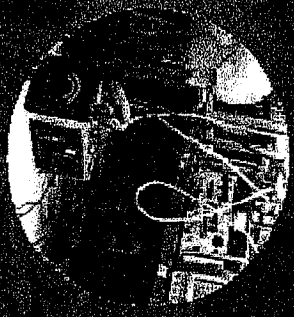
CAD/CAM 11%



Electromechanical/ Mechanical
Systems 2%



Machining 7%



Avionics 3%



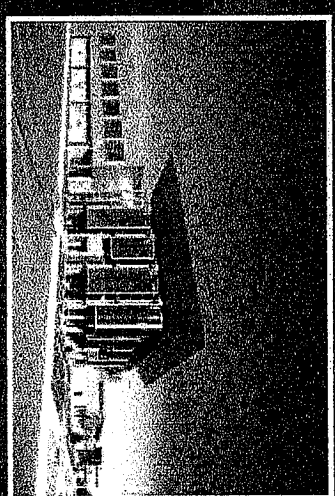
Appropriations Committee
Date February 4, 2011
Attachment 3-15

Growing the Kansas Economy Success Factors

- Largest economic sector in Kansas is

Manufacturing

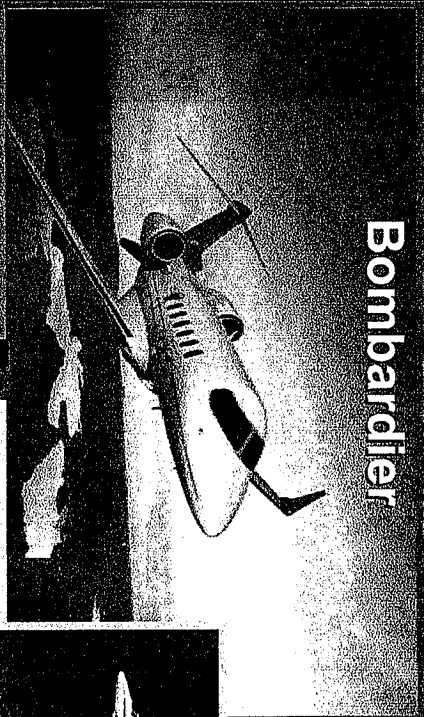
- Retain existing aviation industry – strong companies and suppliers
- Grow our position as global leader in aviation research = **NIAR**
- Flexible, business-driven, high-tech training to meet future skilled workforce needs = **NCAT**
- Stronger Kansas economy and provide stability to state budget



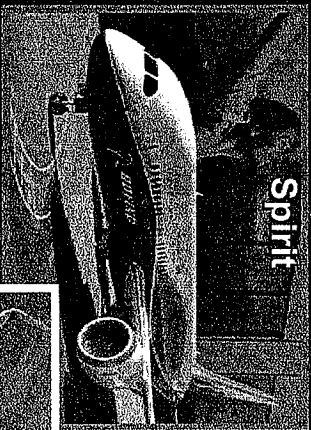
Appropriations Committee
Date February 4, 2011
Attachment 3-16

Industry Request

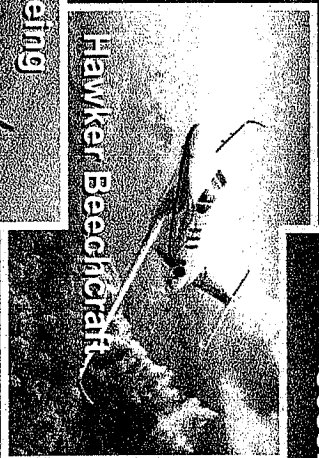
We request your support for combined aviation research and aviation-related training in the current legislative session.



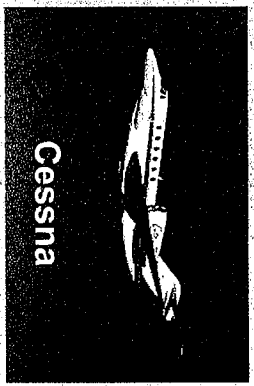
Bombardier



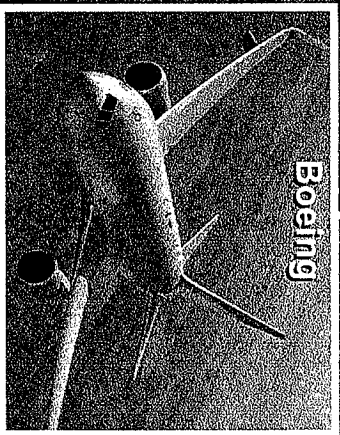
Spirit



Hawker Beechcraft



Cessna



Boeing

Appropriations Committee
Date February 4, 2011
Attachment 3-17

Kansas Aviation Jewel

What's it Worth?

Jobs:

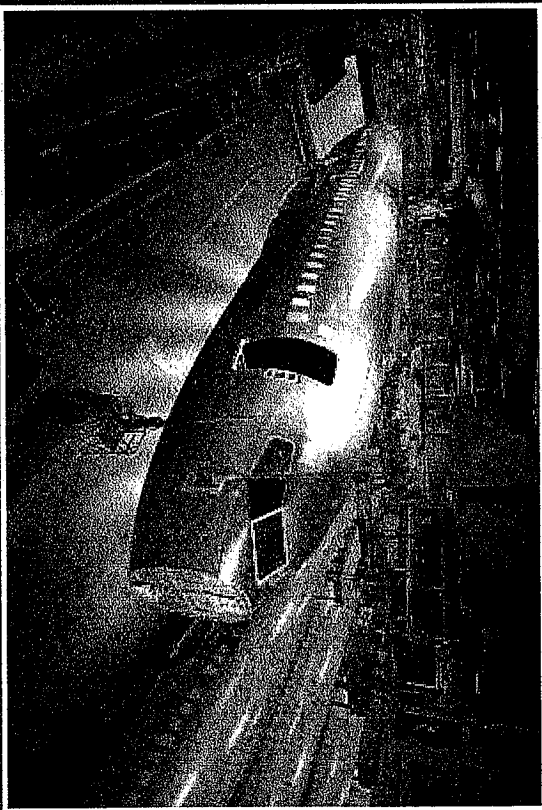
- 119,000 incl. indirect

Wages:

- \$67,440 avg.
- \$2.3B total
- \$5.2B incl. indirect

Corporate/Employee:

- \$5.3M to United Way = 35%
- 10,000's of volunteer hours



~22% of Kansas economy

Appropriations Committee
Date February 4, 2011
Attachment 3-18

Sustaining our Competitive Advantage

Competitive cost structure

Community strategy/plan

Protect the Kansas aviation jewel

Appropriations Committee

Date February 4, 2011

Attachment 3-19

