Targets, UAVS & Range Operations Symposium & Exhibition

Some Enabling Technologies

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October 26, 2011

Honeywell

Agenda

- Budget impacts and macro environment
- Platforms and positions
- Technology portfolio
- Selected products and technology
- Conclusion

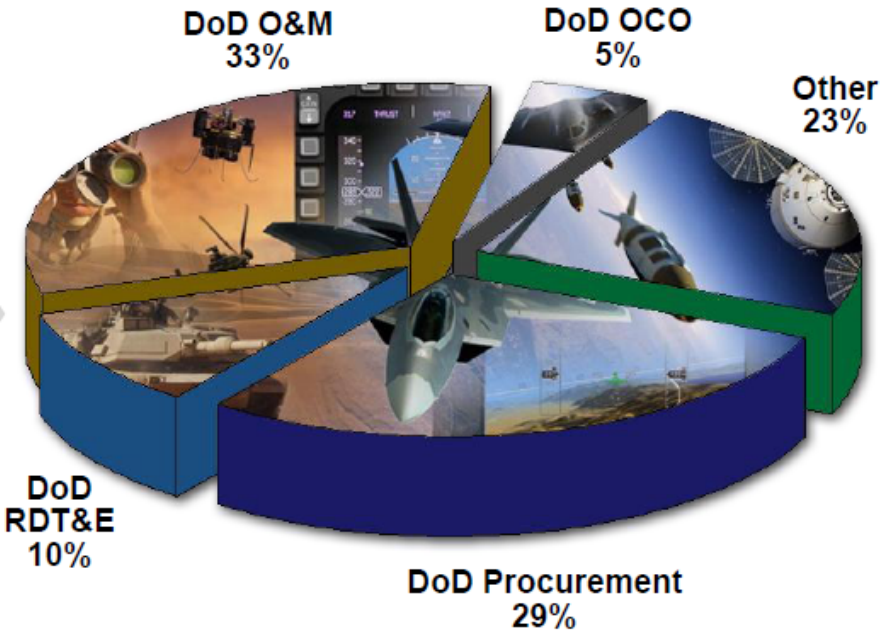
Defense Outlook & Budget Impacts*

DEFENSE BUDGET TRENDS

U.S. Area of Interest	'12-16E CAGR	HON Exposure
O&M	+1 to 3%	+++
OCO	-20 to -25%	+
Procurement	-4 to -6%	++
RDT&E	-10 to -12%	+

Int'l Area of Interest	'12-16E CAGR	HON Exposure
O&M	+2 to 4%	+
Procurement	+3 to 6%	++
Net Total	Flat to +3%	+

HONEYWELL DEFENSE REVENUE MIX



*Management Estimates

Modest Exposure To Declining OCO and RDT&E Budget; International Opportunity

Strong Defense Platform Positions

Conventional Defense & Space (Near-Peer Combatant Threats)

Fighter/Attack/ Trainer Aircraft
30+ platforms

Human Space
10+ Platforms

Surface/Soldier Vehicles
15+ platforms

Bomber Aircraft
3 platforms

DoD, Civil, and Commercial Space
30+ Platforms

Military Helicopters
20+ platforms

Mobility/Tanker Aircraft
40+ platforms

Army, Navy and Air Force
60+ Platforms

Naval Platforms
10+ platforms

Asymmetric Threats

Special Mission/UAV Aircraft
20+ platforms

International: GROWING

International
20+ Platforms

Commercial-Related

Commercial Helicopters
20+ platforms

Services

HTSI
Space, networks, comms, logistics, tech services

FM&T
Specialized services & solutions

Broad & Diverse Install Base Creates Synergy Opportunities

Expansive Product and Technology Portfolio

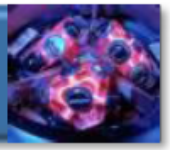
Crew Interface

- Commercial Crew Interface & Displays
- Commercial Software Products
- Flight Management Systems
- Military Crew Interface
- Navigation Database & RNP Services

Safety & Information Management

- Cabin Mgmt System
- Comm/Nav Radios
- DataLink/Data Mgmt & Recorders
- Long Range Communication
- Ground Proximity
- Radar
- Traffic Surveillance
- Integrated Surveillance

Navigation Systems & Sensors



- Commercial Navigation Systems
- Defense & Space Navigation Systems
- Inertial Sensors – Accelerometers
- Inertial Sensors – Gyros
- Non-Inertial Sensors
- Magnetics & Personal Nav Systems
- Precision Landing Systems
- Radiation-Hardened Components
- Space Navigation
- Tactical Navigation Grade Systems

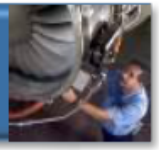
Propulsion

- AGT1500
- ALF502/LF507
- CFE738
- F124/F125
- HTF7000
- HTS900
- LTS101
- T55
- TFE731
- TPE331

Platform Systems / High Integrity Controls

- Integrated Avionic sSystem
- T-Hawk Micro Air Vehicle
- Real-time Information in a Tactical Environment (RITE)
- Space Systems
- Electronic Eng Controls
- Flight Controls
- Space Pointing & Stabilization

Aero Services



- Vibration Monitoring/HUMS
- Zing™ Remote
- Maintenance Services
- Flight Support Services

Mechanical Sub Systems

- Air & Thermal Systems
- Auxiliary Power Units
- Electric Power

Mechanical Components

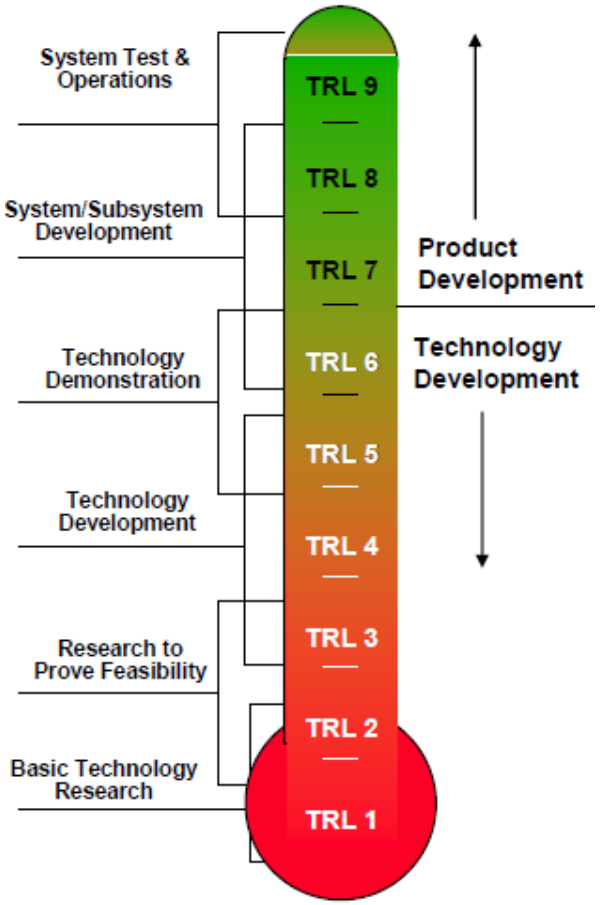
Wheels & Brakes

Lighting

Focused on Safety, Cost and Efficiency

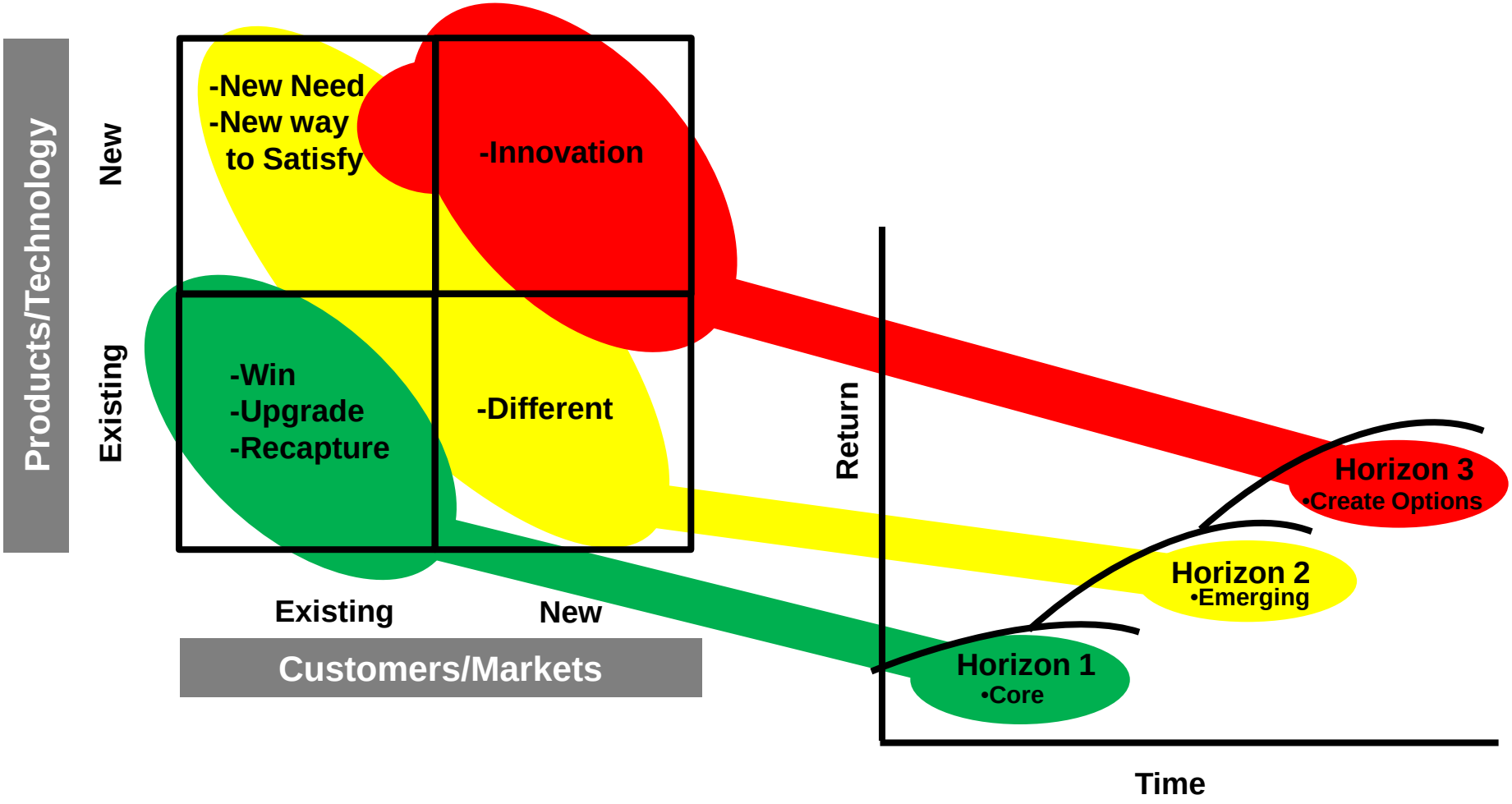
Product and Technology Development

- Product development
  - Has clear external customers
  - Utilizes proven technologies
  - Late stage-gate development
  - Tightly connected to market opportunities
- Technology development
  - Has internal or S&T customers
  - Matures technology (TRL < 6)
  - Supports early stage-gate product development
  - Tied to market need



Distinction Between Product & Technology Development

(Product) and Technology Field of Play



Product & Technology Horizons Support Different Needs

(Product) and Technology Field of Play

Horizon 1

- Core technology
- Approaching maturity
- Mild improvements
- Engineering to sustain
- Mostly existing products
- Available

Horizon 2

- Technology differentiation
- Patentable or licensable
- New entry
- Horizon 1 replacement
- Mostly existing products
- ~TRL 4-7

Horizon 3

- Disruptive
- Discontinuous
- Provides diversification
- Exclusive IP
- Basic/applied research
- ~TRL 1-3

Product & Technology Horizons Support Different Needs

Some Enabling Products and (Technologies)

Radar Altimeters

- 0-30,000 ft
- 28V 16W
- 59 Cu In and 3 lbs.
- RS 422 and Analog I/O

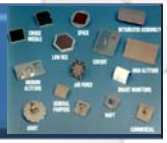
Rate Sensors

- 2 or 3 Axis
- 5V and .13 lbs.
- MEMS technology
- RS 422 Digital Output

INS/GPS Systems

- INS/GPS Deeply Integrated
- Modular and configurable
- MEMS or RLG based
- 2.4 inches (d) x 2.5 inches (h)

Antennas

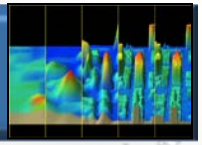


- Low-Observable and custom
- Beam shaping

Inertial Measurement

- RLG or MEMS technology
- 5V and 15V
- 1.6 lbs to .35 lbs
- 33 Cu In. to 4 Cu In.
- RS422 Digital Interface

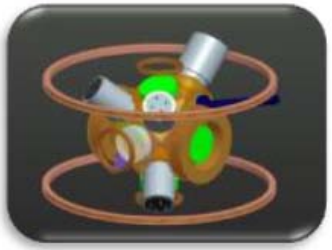
Terrain Navigation



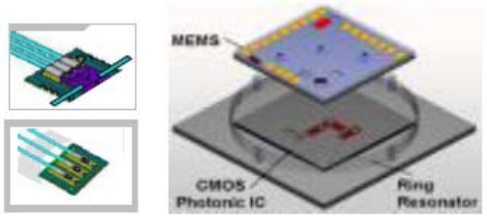
- Height above ground
- 3D position
- High speed digital processing
- Doppler beam sharpened interferometric radar altimeter
- Digital map correlation

Horizon 1 Products & Technology Are Available

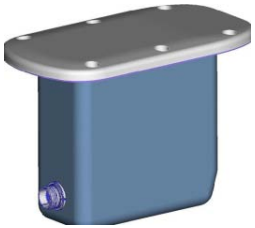
Growing Emerging Technologies



Cold Atom Clock



Band Gap RFOG



Single Antenna Radar Altimeter

MEMS and System-on-Chip

Reaction Jet & Hybrid Controls

Growing Technologies For Evaluation and Insertion

R&D Yield Function

R&D Yield =

f (R&D effectivity, R&D efficiency)

- **R&D effectivity means working on the "right" things. This implies <u>every technology has a path to a valued product and market.</u>**
- **R&D efficiency means that we are good stewards of the funds. This implies that our <u>project management discipline</u> is sound (including make/buy, buy/source process for efficient application of the funds)**

System Challenges

- Keep pace with the evolution of threats
  - Evolution or revolution of vehicle capability
- Develop and enable new target capabilities
  - Enhance capabilities in guidance, navigation and control systems
- Manage and execute production
- Control cost of acquisition, operation and maintenance
  - Total life-cycle cost
  - Inventory and obsolescence

"Do More With Less" to Overcome Challenges – 360º Collaboration

In Conclusion

- Technology Leadership
  - Precision Navigation, Power/Propulsion, Safety Products
- System Integration Capabilities
  - Power Management Systems, Avionics, Air Systems
- Logistics & Support
  - In-Theater Support, Asset Management, Predictive Maintenance
- Global Footprint Customer Support

Industry Leader Committed to Innovation & Performance

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