Honeywell Introduction
Ignace Verhamme
### Great Positions in Good Industries

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**Honeywell**
Energy Efficiency

More than 50% of Honeywell’s portfolio offers energy efficiency benefits

By immediately and comprehensively adopting existing Honeywell products, the United States could reduce energy consumption by 20 to 25 percent
Honeywell Today

- **A Fortune 100 company** – $33.1B in sales (+7% vs. 2009)
- **130,000 employees** in 120 countries (~19,000 in R&D)

**Diverse Businesses, Technologies and Solutions**

- **Automation and Control Solutions**
  - $13.6B (41%)
  - (+9% vs. 2009)

- **Aerospace**
  - $10.7B (32%)
  - (0% vs. 2009)

- **Transportation Systems**
  - $4.2B (13%)
  - (+24% vs. 2009)

- **Specialty Materials**
  - $4.6B (14%)
  - (+12% vs. 2009)
Aerospace

Developing innovative safety products, driving the modernization of global air traffic management, revolutionizing combat technology and committed to improving operational efficiencies.

Products:
- Integrated avionics
- Propulsion engines
- Aircraft and engine systems
- Full-service solutions for airliners, business and general aviation aircraft, military aircraft and spacecraft.

Businesses:
- Air Transport & Regional
- Business & General Aviation
- Defense & Space

- Phoenix, AZ headquarters
- 38,000 employees at nearly 100 locations
- $10.8-11.2B revenues (2011 estimate)
Specialty Materials

A global leader in providing customers with high-performance specialty materials in a broad set of markets and products ranging from refining and petrochemical production and next-generation biofuels to ballistic protection and environmentally friendlier refrigerants, blowing agents and solvents.

Products:
- Process technology, equipment, catalysts and services for the refining, petrochemical and natural gas industries
- Refrigerants and other fluorocarbons, including blowing agents and solvents
- Specialty films and additives, and specialty chemicals
- Advanced fibers and composites
- Nylon materials and ammonium sulfate fertilizer
- Electronic materials and chemicals

Businesses:
- UOP LLC
- Fluorine Products
- Resins and Chemicals

- Specialty Products
- Electronic Materials

- Morristown, NJ headquarters
- 8,500 employees
- $5.0-5.2B in revenues (2011 estimate)
Transportation Systems

From fuel-saving and emission-reducing turbochargers to safety-enhancing brake materials, our technologies enhance the performance, safety and efficiency of passenger and commercial vehicles worldwide.

Products:
- Turbochargers for passenger vehicles (gasoline, diesel, and hybrid), medium- and heavy-duty trucks, and off-highway, heavy-duty equipment
- Braking materials and brake pads for cars, commercial vehicles and rail applications
- Car-care aftermarket products*, including Prestone® antifreeze/coolant, Autolite® platinum spark plugs, FRAM® automotive filters, and Holts® car care products

Businesses:
- Consumer Products Group*
- Friction Materials
- Turbo Technologies

*divestiture pending

- Rolle, Switzerland headquarters
- 10,000 employees
- $4.3-4.5B in revenues (2011 estimate)
Automation and Control Solutions

Our sensing and control expertise captures more and better data faster, across a wireless landscape; improves productivity, safety, and security; drives better decision-making; reduces costs; and unifies Honeywell’s ACS businesses.

ACS products, solutions and services are in 150 million homes, 10 million buildings, 5,000 industrial facilities and hundreds of utilities worldwide.

Products, Solutions and Services:
- Building Control Systems; Energy Management and Services
- Control Systems for Continuous Process Industries; Advanced Solutions
- Home Comfort; Building Controls; Combustion; Wiring Devices
- Sensors; Switches; Mission-Critical Applications
- Fire Alarm Systems; Gas Detection; Personal Protective Equipment; Remote Health Monitoring
- Alarm Systems; Access Control/Video; Low Voltage Distribution (ADI); Cable and Custom Electronics
- Automatic Identification and Data Collection

Businesses:
- Building Solutions
- Process Solutions
- Environmental and Combustion Controls
- Sensing and Control
- Life Safety
- Security Group
- Scanning and Mobility

- Minneapolis, MN headquarters
- 65,000 employees at more than 120 locations
- $14.7-15.1B revenues (2011 estimate)
Automation and Control Solutions (ACS)

- $13.6B revenue in 2010 performed by 7 strategic business units
- 75,000 employees (7,000 new through acquisitions – Sperian & Matrikon)

### Process Solutions 20%
- Process Controls
- Building Controls
- Instant Alert
- Sensors

### Building Solutions 19%
- Building Controls
- Airport Systems
- Instant Alert

### Sensing and Control 5%
- Speed and Position Sensors
- Accelerometers
- Gas Valves
- Electrical Devices & Systems
- Sensors

### Environmental & Combustion 19%
- Thermostats
- Building Automation
- Water Control
- Gas Detection

### Security 17%
- Motion / Human Presence Sensors
- CCTV / DVM
- User Interface
- Access Control Systems

### Life Safety 17%
- Fire/Smoke Sensors
- System Panels
- Gas Detection
- Home Medical Care

### Scanning & Mobility 3%
- Mobile Computers & Software
- Scanners

$13.6 Billion Company Focused on Automation and Security
Honeywell Process Solutions (HPS)

Industrial Channel of ACS
$2.7 Billion in Sales (+7% vs. 2009)
12,000 Employees
120 Countries

- Safety
- Reliability
- Efficiency
- Sustainability

Field Solutions
Field Devices, Advanced Sensors, Controllers, Wireless

DCS/ESD Control Solutions
Refining, Chemicals, Oil & Gas, Power, Life Sciences, Mining, Paper

Advanced Solutions

Lifecycle Services

Improving Business Performance over the Plant’s Lifecycle
**Recent Acquisitions/Alliances 2005 - 2010**

**Acquisition** of hazardous, flammable & combustible gas & fire detection systems
*Jul. 2005*

**Acquisition** delivering improved refinery operation solutions (part of Specialty Materials)
*Jan. 2007*

**Acquisition** delivering combustion burners, gas valves, low NOx burners and engineered systems providing energy efficient heating solutions
*Oct. 2007*

**Acquisition** delivering comprehensive solutions for transportation, storage and blending operations
*Jun. 2007*

**Acquisition** delivering design, supply & commissioning of environmental and combustion equipment and services for O&G and petrochemicals
*Dec. 2008*

**Acquisition** of Norcross Safety Products, a leading manufacturer of Personal Protective Equipment
*Apr. 2008*

**Acquisition** providing design, supply & commissioning of environmental and combustion equipment and services for O&G and petrochemicals
*Jun. 2009*

**Alliance** providing jointly MES/ERP solutions
*Jun. 2010*

**Acquisition** of OTTER (Operational Technical Tasks & Efficient Rounds) helping to guide field operators
*Aug. 2010*

**Acquisition** of APC and Optimization business incl. linear and non-linear controls & optimization software
*Mar. 2011*

**Acquisition** of a leading manufacturer of laser and mobile imaging and remote scanning
*Jul. 2011*

**Acquisition** a Germany based global leader in natural gas measuring, control and analyzing equipment, services, and integrated solutions
*Nov. 2011*

**Acquisition** a global leading supplier of Personal Protective equipment (PPE) design and manufacturing offering a complete “head to toe” solution
*Jan. 2012*

**Investing in Advanced and Innovative Technology**
Honeywell Expanding Geographical
Technology & Innovation

Developing solutions for the world’s toughest challenges and building on Honeywell’s Great Positions in Good Industries

• Research, Development and Engineering is the growth engine for Honeywell
• 19,000 scientists and engineers worldwide
• 97 research and engineering facilities
• Honeywell Technology Solutions in India, China and Europe
• More than 30,000 patents or patents pending worldwide
Value Through Innovation

Wireless Technology
- Applications enhance productivity and safety
- Enabling new market opportunities

Bio Renewables Process Technology
- Honeywell Green Diesel™ and Honeywell Green Jet Fuel™
- Conversion of waste plant materials to fuels

Smart Grid
- Integrates energy efficiency systems
- $100 million U.S. Department of Energy grants
- Recent acquisitions: Akuacom and E-Mon
Value Through Innovation

Low-Global-Warming-Potential Fluids

- LGWP for refrigeration, air conditioning and insulating foam
- Regulations driving acceptance of HFO-1234yf for auto air conditioning

New Air Traffic Management and Flight Safety

- Increasing flight efficiency
- Flight safety enhancements

Turbochargers

- Lower emissions
- ~20% better fuel economy
- Expanded adoption on gasoline engine platform
Improve Business Performance

Safety

Protect People, Assets & Processes

Reliability

Improve Availability
Reduce Downtime

Efficiency

Improve Productivity
Reduce Cost

Sustainability

Maximize Return on Investment

Honeywell solutions address these critical business performance issues
You Know Us for Process Automation

Automation & Control

MES & ERP Integration

Plant Performance Solutions

Advanced Control

Simulation

Field Instruments & Sensors

Lifecycle Services
Get to Know Our Enterprise-Wide Solutions

Automation & Control

MES & ERP Integration

Plant Performance Solutions

Advanced Control

Simulation

Field Instruments & Sensors

Lifecycle Services

Emissions & Environmental

Fire & Gas Monitoring & Detection

Project Engineering / MAC

Transmission & Distribution

Turbine Control

Burner Management

Demand-side Management

Alternative Energy Technology

Automation & Control

MES & ERP Integration

Plant Performance Solutions

Advanced Control

Simulation

Field Instruments & Sensors

Lifecycle Services

Gas Management

Management
“One Honeywell”

Honeywell as Integrated Main Automation Contractor

Honeywell Businesses
- Process Solutions (including Enraf & Field Solutions)
- Building Solutions
- Sensing and Control
- Environmental Combustion and Controls (Callidus, Maxon)
- Security
- Scanning and Mobility (Data Collection)
- Life Safety (Zellweger & BW Technologies)
- UOP

PKS Advantage Partners

Strategic Partners

“One Honeywell” Provides Solutions BEYOND Process Control
“One Honeywell”… What is it?

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PKS Advantage Partners

Strategic Partners

“One Honeywell” Provides Solutions BEYOND Process Control
Honeywell Digital Video Manager

Capture
- Field Devices
  - Analog Cameras
  - Network Cameras
  - Various encoding formats
  - Inputs/Outputs
  - Bi-directional audio / Intercom
  - Video Motion Detection

Manage
- Manage Video
  - EBI/Experion integration
  - System configuration
  - Receive & transmit video/audio
  - Video Analytics
  - Redundancy
  - Event log

Record
- Video Archive & Storage
  - Hardware agnostic
  - Internal, DAS, NAS
  - RAID for data integrity
  - Video quality configurable per camera
  - Auto archive/delete

View
- Clients
  - IE Client & EBI / Experion Station
  - Multi-monitor
  - Video wall
  - Live/Recorded video
  - PTZ Control
  - Intercom
  - Search & export

Integrate
- Integration
  - EBI & Experion
  - Alarms & events
  - Reporting
  - Full client
  - Seamless integration
  - Event-activated recordings
  - Complex mapping
“One Honeywell”… What is it?

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Strategic Partners

“One Honeywell” Provides Solutions BEYOND Process Control
Valve Position Sensor

• Attributes
  – Identify stuck valve condition
  – Monitor true valve position

• Functionality
  – Position Sensor is based on MICRO SWITCH™ CX series hazardous location limit switch

• Usage scenario - monitoring applications
  – positioners, manual process valves, safety shower notification, tank level indication, door position, louver/damper position

• Note - Removable cover provides access to the IR port. Also facilitates calibration points and battery access
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Strategic Partners

“One Honeywell” Provides Solutions BEYOND Process Control
ECC – Expansion to High-Temp Industrial

**Products**
- Boiler & burner controls
- Flame detectors
- Hydronic controllers
- Gas valves
- Single burner management controls
- Single burner flame detection
- Limit controls

**Projects / Solutions**
- Shut-off valves (gas & liquids)
- Burner management controls
- Industrial burners
- Engineered combustion systems
- Combustion Ratio Flow Control
- Oxy-fuel technology

- Refinery/Petrochem Burners & Controls (conventional, low-NOx, ultra low-NOx)
- Flares (pipe, smokeless, low noise, air-assisted, offshore flare, pit flare…)
- Thermal Oxidizers (Incinerators)
- SCR (Selective Catalytic Reduction)

*Optimizing Burner Efficiency, Emissions & Energy Efficiency*
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Strategic Partners

“One Honeywell” Provides Solutions BEYOND Process Control
EPCIP… What can Honeywell Bring to the Table?

**COMMAND AND CONTROL**
Control center that brings all systems together at a central point on a single platform for event reporting and response.

**ACCESS CONTROL**
Systems used to secure the access to a facility or an area. Includes locks, card readers, visitor/contractor badging, biometric readers, and software used for access authentication, asset tracking, mustering and site lockdown.

**EXTENDED PERIMETER**
Systems used to detect or protect approaching threats. Includes RVS and barriers for use near waterways and open areas beyond the perimeter.

**VIDEO SURVEILLANCE (CCTV)**
Systems used to watch a facility. Includes cameras, housings, mounts, monitors and software used for security and process control.

**PERIMETER INTRUSION DETECTION**
Systems used to secure the perimeter of a facility or an area. Includes fence detection, PE beams tied back to a panel and reported through the software.
“One Honeywell”… What is it?

**Honeywell** as Integrated Main Automation Contractor

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**PKS Advantage Partners**

**Strategic Partners**

“One Honeywell” Provides Solutions BEYOND Process Control
Handheld Hardware
• 1Q2010 - Dolphin 9900 (all radios) to support UL Class1Div2 certification
  - Honeywell passed successfully the testing … waiting for official documents
• 3Q2010 - Dolphin 9900 (all radios) to support ATEX Zone 2 certification
• Dolphin 9900 with integrated RFID engine is under testing

Handheld Software
• 1Q2010 - HPS acquired OTTER technology from Shell Global Solutions
  - OTTER = Operational Technical Tasks and Efficient Rounds
  - Guide for field operators
  - Will be called Field Advisor (to be released in April 2010)
• Field Advisor will be enhanced and integrated with other Advanced Solutions software (OMPro, …)

The Power of ONE!
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PKS Advantage Partners

Strategic Partners

“One Honeywell” Provides Solutions BEYOND Process Control
Next Generation ‘OneWireless’ Portables

Standard 2 way wireless radio
• Gas Detection
• Communicate & Alert
• Location

“One Honeywell” introduces “OneWireless” Value Applications
“One Honeywell”… What is it?

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PKS Advantage Partners

Strategic Partners

“One Honeywell” Provides Solutions BEYOND Process Control
HPS and UOP Collaborating to Improve Solutions

**Design Readiness**
- UniSim Design
- UOP Process Models

**Operational Readiness**
- Experion PKS
- UOP Master Simulation Models
- Experion Design Templates
- Efficient DCS Design, Graphics
- Field Advisor
- UOP Best Practices

**Operational Effectiveness, Production Optimization**
- Procedural Operations
- Profit Suite
- Operations Monitoring
- UOP Boundaries & Limits
- BGP Remote Pfmc Monitoring

**“UOP Inside” Delivers Faster Startups and APC Sooner**
“One Honeywell”… What is it?

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**PKS Advantage Partners**

**Strategic Partners**

“One Honeywell” Provides Solutions BEYOND Process Control
Strategic Partners - Microsoft / IBM / SAP

Microsoft
Leverage MS technologies to build Honeywell solutions
Co-market and resell Microsoft products as companions to our solutions
Examples SharePoint & SQL Server

IBM
Leverage alliance agreement with IBM
Proactively co-market, sell, consult, deliver and service all of our offerings focused on remote services and supply chain solutions
Maximize each company’s unique position with our customers.

SAP
Leverage SAP products, presence, knowledge in certain verticals
Co-design and develop, co-market, and sell New Honeywell/SAP offerings appearing in both SAP and Honeywell price books

“One Honeywell” Delivers Solutions with Strategic Key Partners
“One Honeywell” Solutions Capability Snapshot

Integrated Main Automation Contractor
Manufacturing Execution Solutions
Plant Security Solutions
Terminal Automation
Building Control Automation
Blending & Movement Automation
Emissions/Energy/GHG Management
Asset Management
Operating Boundary Management
Integrated Fire & Gas Detection
Process Design Simulation

Supply Chain Management
ERP Multi-site Integration
Lifecycle Services Management
Operator Training Simulation
Process Control Automation
Field Automation
Online Corrosion Monitoring
Operations Procedures Automation
Mobile Operations Automation
Advanced Alarm Management
Wireless Enabled Applications

Cyber Security Services
Advanced Process Control
Remote Support Services
Asset and People Tracking
Early Event Detection
...
Questions & Answers