Changing the Face of Distributor Engagement

Shell Virtual Assistant

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DEFINITIONS & CAUTIONARY NOTE

The New Lens Scenarios are part of an ongoing process used in Shell for 40 years to challenge executives’ perspectives on the future business environment. We base them on plausible assumptions and quantification, and they are designed to stretch management to consider even events that may be only remotely possible. Scenarios, therefore, are not intended to be predictions of likely future events or outcomes and investors should not rely on them when making an investment decision with regard to Royal Dutch Shell plc securities.

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this document “Shell”, “Shell group” and “Royal Dutch Shell” are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words “we”, “us” and “our” are also used to refer to subsidiaries in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies.

“Subsidiaries”, “Shell subsidiaries” and “Shell companies” as used in this document refer to companies over which Royal Dutch Shell plc either directly or indirectly has control. Companies over which Shell has joint control are generally referred to as “joint ventures” and companies over which Shell has significant influence but neither control nor joint control are referred to as “associates”. The term “Shell interest” is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in a venture, partnership or company, after exclusion of all third-party interest.

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We use certain terms in this presentation, such as discovery potential, that the United States Securities and Exchange Commission (SEC) guidelines strictly prohibit us from including in filings with the SEC. U.S. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov. You can also obtain this form from the SEC by calling 1-800-SEC-0330.
Brief Introduction to Shell Global Lubricants.

Our Objectives:
- In our business context what is a Virtual assistant.
- Our Goals

What do our customers and distributors expect from us.

What types of queries to we get now through existing channels.

Have a clear strategy and understanding of your business.

Define the key elements and complexity of the requirement.

Getting started.

How to evaluate potential vendors.

Designing typical Q & A flows.

Results of the Pilots.

Phase 2 deployments

Did it meet our goals?

The future of AI.
Shell is an innovation-driven global group of energy and petrochemical companies

We are active in more than 70 countries

Worldwide, we employ 93,000 full-time employees

Our fuel retail network has around 43,000 service stations

On average, we produce 3 million barrels of oil equivalent per day (crude oil and natural gas).

In 2015, we:

- generated earnings* of $3.8 billion
- had $28.9 billion of capital investment
- spent $1.1 billion on R&D

Royal Dutch Shell plc is a UK company, with its headquarters in the Netherlands

We are listed on the stock exchanges of Amsterdam, London and New York

*On a current cost of supplies basis attributable to Royal Dutch Shell plc shareholders

Source: 2015 Annual Report and Form 20-F
BUSINESS OVERVIEW

EXPLORATION
- Exploring for oil and gas: Onshore and offshore

DEVELOPMENT AND EXTRACTION
- Developing fields
- Producing oil and gas
- Extracting bitumen

MANUFACTURING AND ENERGY PRODUCTION
- Refining oil into fuels and lubricants
- Producing petrochemicals
- Liquefying gas by cooling (LNG)
- Converting gas into liquid products (GTL)
- Upgrading bitumen

TRANSPORT AND TRADING
- Shipping and trading
- Regasifying (LNG)
- Supply and distribution

RETAIL AND B2B SALES
- Producing biofuels
- Generating power

Copyright Royal Dutch Shell plc
## BUSINESSES AND FUNCTIONS

### UPSTREAM
- Operated
- Joint ventures
- Deepwater
- Safety & environment
- Production excellence
- Exploration

### INTEGRATED GAS
- Venture development
- Production excellence
- Qatar
- Australia & New Zealand
- Russia
- Safety & environment
- Ventures
- Commercial/NBD

### DOWNSTREAM
- Refining
- Pipelines
- Chemicals
- Trading and Supply
- Retail
- Lubricants
- Business to business
- Biofuels

### PROJECTS & TECHNOLOGY
- Innovation, R&D
- Technical IT
- Project execution
- Global technical expertise
- CO₂ management
- Safety and environment
- Contracting and procurement

### FINANCE
- Finance
- IT
- Investor relations
- Tax
- Strategy
- Planning and appraisal
- Internal audit

### HR & CORPORATE
- HR
- Real Estate
- External Relations
- Shell Aircraft
- Health
- Security

### LEGAL
- Legal
- Compliance
- Intellectual property
With around 43,000 service stations in over 70 countries, Shell has one of the largest single-branded fuel retail networks in the world.

Every day, we sell nearly 430 million litres of fuel.

A heritage of fuels innovation has led to the development of Shell V-Power and Shell FuelSave, designed to improve engine performance and help save fuel.

Partnerships with leading retailers combine quality fuel and convenience food.

Technical relationships - e.g. with Scuderia Ferrari - mean we can transfer innovative technologies developed for the racetrack to road fuels for customers.
Shell is the global leader (in terms of market share and branded product) in finished lubricants.

We make and sell a wide variety of lubricants for the automotive sector, heavy-duty transport, mining, power generation, construction and general manufacturing sectors.

Our leading brands include Shell Helix, Shell Rotella, Pennzoil, Quaker State, Shell Tellus and Shell Rimula.

Our lubricants are available in more than 100 countries.

Through partnerships with major motor racing teams, we transfer the technology of the race track to the road.
**Our objectives**

**In Shell’s business context what is a Virtual Assistant?**

A Virtual Assistant is a computer generated, animated, artificial intelligence virtual character that serves as an online customer service representative (Technical & CSC). It leads an intelligent two way conversation with users. It should be able to answer both Lubricants and fuels technical questions that are asked by our distributors + B2C and B2B customers.

**Our Goal**

- Deliver a new and innovative service that demonstrates technology leadership.
- To divert simple technical helpdesk (THD) interactions to a lower cost to serve channel.
- To introduce a 24/7 self serve channel for technical support.
- Significantly increase service level to customers.
- Ensure consistent & legally correct answers given.
- Gain better insight around technical & service needs of our customers.
- Deliver faster customer service.
- Test case for use of natural language apps in other areas of Shell.
- To promote self serve.
CUSTOMERS & DISTRIBUTORS EXPECT SHELL TO PROVIDE TECHNICAL INFORMATION, ADVICE & SUPPORT*

Customer/Distributor needs information, advice or support

The spectrum of technical queries that Shell receives can be formed into 6 categories

- **Documents**: Requests for TDS, MSDS & marketing literature
- **Recommendations**: Product alternatives, right Shell product, range, family, old-new translation
- **Availability**: Product availability, pack sizes, where to buy
- **Properties**: Physical properties, test methods, specifications, OEM approvals
- **Application Advice**: Product performance/application technical queries, application queries, LubeAnalyst interpretation
- **Complaints/Other**: Complaints/misplaced actions

*Commercial fuels & lubricants
**Heldesk Queries by Categories**

- Product Recommendation 12% 701
- Product Recommendation (make model to lube rec) 12% 659
- Competitor cross reference 11% 625
- Unable to categories 11% 611
- Obsolete / historic product (old shelf to new) 10% 577
- Application question (not for Virtual assistant) 8% 448
- Services-LubeAnalyst 6% 336
- Fuels 5% 274
- Obsolete / historic product (No longer sold) 5% 273
- Product availability 4% 241
- MSDS request 4% 206
- Specification to Lube recommendation 3% 187
- Where to buy (Various Lob) 3% 146
- Order 2% 139
- Wrong placed action> divert to alternative MASP 2% 98
- TDS request 1% 59
- Account setup/ credit check / order 1% 47
- Storage & Handling + Transportation & Waste question 1% 36
- Product Quality 1% 29
- Claim 0% 2
### THERE ARE 6 QUERY CATEGORIES & 28 QUERY TYPES

<table>
<thead>
<tr>
<th>Documents</th>
<th>Recommendations</th>
<th>Availability</th>
<th>Properties</th>
<th>Product/Application Advice</th>
<th>Complaints/Other</th>
</tr>
</thead>
</table>
By Polarising support we can move 45% of our simple B2C and distributor calls to much lower costs technical support Options.

This will free up our skilled technical resources to focus on direct market Gold and Platinum account.

By doing this we will improve service levels whilst at the same time reducing costs.

Today approx 45% of calls are simple, 49% complex & 6% complaints

At least 40% of calls come from the Indirect channel.
Handles over **3,000** Shell products, providing answers and information based on:

- **100,000** Information data sheets
- **1,000** different pack options
- **1,100** different physical characteristics

Recognizes **2,000** obsolete Shell products (and recommends current Shell alternatives)

Understands over **31,000** products from Shell competitors

- Offers the best Shell alternative product

Correctly redirects ‘misplaced’ customer queries to the correct location drawn from **40** different departments within Shell

Speaks multiple languages including Russian, Chinese, German & different variations of English

Operates in **151** different countries

Needs to interface with many different databases and sources.
SUPPORTS COMPLEX SEARCH

Search by product family
E.g. what biodegradable products do you sell

Search by physical characteristics
E.g. can you suggest me a mineral grease

Search by product application
E.g. I am searching for transmission oils

Search by product name
E.g. I need the technical documents of Helix Ultra 5W

Search by car manufacturer
E.g. what oil can I use in my Subaru Impreza

- Shell product database
- Vehicle/Equipment database (third-party)
- Document Repositories: Brochures, tech docs, pdfs, etc - sent via email
- Mail server: Supports email-sending functionalities
GETTING STARTED

- Define a clear scope, business case and strategy.
- Gain support from the management team.
- Establish a Steering group, core team and local teams.
- Appoint lead roles SC, Technology lead, IT PM and KN leads.
- Review Gartner studies and vendor ranking.
- Pre shortlist 3 or 4 vendors.
- Engage with vendors, get introductory presentation and visit some customers.
- Create a list of questions, example data for the main Q & A categories and request that vendors prepare a real live demo of all scenario’s. which is to be presented to the team along with the RFQ / offer.
- Evaluate, Select and contract.
- Implement in pilots
  - System / tools training.
  - Workshop all flows face to face with the TM and KM team + Vendor team.
  - Implement pilots.
  - Measure / monitor and improve.
# HOW TO EVALUATE POTENTIAL VENDORS

## Provide real life example questions for all the main KM areas to the vendors.

### Visual Assistant functionality demonstration questions

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Legal and senators</th>
<th>Identity subject</th>
<th>Outlier value required for the demonstration</th>
<th>Data source to be made available for the demonstration</th>
<th>Explanation of data/rows provided</th>
<th>Correct answer: required action you should demonstrate</th>
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</thead>
<tbody>
<tr>
<td>Product name or product</td>
<td>Yes</td>
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<td>Product description</td>
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<td>Product access or assure server connection will be</td>
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<td>Provide real life example questions for all the main KM areas to the vendors.</td>
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<td>Provide for each question data/databases, so the vendors can make demonstration examples for each.</td>
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</table>
Document the criteria that are important to your business.

Give each item a weighting.

Decide on the measures and proof points you need, to establish a score for each vendor.

Discuss and align your core team what score should be given to each vendor for that item.

The best decision is absolutely clear at the end of this process.
Shell Virtual Assistants were first piloted in the US and UK in April 2014.

Intuitive, helpful and expert, our intelligent computer generated agents, Shell Virtual Assistants Emma & Ethan can dynamically interpret, understand and respond to online customer requests for help or information.

Available 24 hours, anywhere with online access

Provides IMMEDIATE assistance for basic technical questions

Easy conversational style: speaking our customers’ natural languages

**Market trends - Why did we develop Shell VA?**

Increasing demand by customers for quick, online assistance, anywhere, anytime:

Already tried and tested by a wide range of blue chip companies

At least 15% of Fortune 1000 companies use a virtual assistant (Banking/Retail)

60% of customers use a company’s website as the first method for resolving their issues

**Potential benefits**

Significantly increase our service level to distributors and customers

Consistent and legally correct answers given

Better insights into our customers technical and service needs gained through usage data gathering

Enables us to link multiple databases and potentially decommission some IT systems

Faster customer service
SHELL LAUNCHES AI-POWERED SERVICE FOR LUBRICANT CUSTOMERS

Aug 4, 2015

Shell is the first company in the lubricants sector to launch an artificial intelligence-driven service for customers - Shell Virtual Assistant.

It is an interactive one-stop shop on the Shell website where customers and distributors can ask common lubricant-related questions, available 24 hours a day, seven days a week.

Customers and distributors type in their question via an online message window, and avatars Emma and Ethan reply back with an appropriate answer within seconds. The interaction is similar to a chat conversation, but instead of a live person on the other end, it is all done through artificial intelligence via a technology known as Natural Language Interaction. This technology allows interaction using normal, everyday language and is also in use in certain popular personal assistant applications.

This new lubricant service by Shell is now available to customers and distributors in the United Kingdom and the United States. Shell Virtual Assistant is capable of answering questions such as:

- where to buy lubricants
- what pack sizes are available
- give information about product technical properties
- the service can also attend to requests for brochures, Technical Data Sheets (TDS), Material Safety Data Sheets (MSDS).

"Shell offers a wide range of lubricant-related services in addition to our product range. Our services help customers choose and use the right product to improve their operations. Shell Virtual Assistant is the next step in our delivery of great support - it is like having a technical expert at your fingertips, ready to answer your technical questions anytime. We are now evaluating launching Shell Virtual Assistant to other markets and in other languages in the near future," said Roger Moulding, Vice President of Global Marketing, Shell Lubricants.
VA Results: INTERACTIONS GREW CONSISTENTLY DURING THE 2014 US/UK PILOT

A simple extrapolation would suggest **50%** virtual Shell interactions in 2015.

# Regional Helpdesk + VA Interactions

## 2014

<table>
<thead>
<tr>
<th>Month</th>
<th>TIC-PQS</th>
<th>TIC-Canada</th>
<th>TIC-Email</th>
<th>TIC-Shell</th>
<th>SEA-UK</th>
<th>VA Interactions</th>
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**TIC-PQS**
**TIC-Canada**
**TIC-Email**
**TIC-Shell**
**SEA-UK**
**VA Interactions**
88% OF VA INTERACTIONS ARE REQUESTS FOR PRODUCT RECOMMENDATIONS AND DOCUMENTS

- Recommendations: 69%
- Documents: 19%
- TDS/MSDS: 17%
- Product X-ref: 57%
- LubeMatch: 11%
- Availability: 5%
- Complaints/Other: 4%
- Properties: 3%

Based on 13,700 US/UK VA Interactions
1 Apr – 7 Oct 2014

Use of Virtual Assistant in the US is heavily biased towards Distributors

Early usage in the UK inflated through testing by GTSU

UK usage is more evenly split
User feedback has been strongly positive in the last three months of the US/UK trial.

Shell’s Virtual Assistant has become a great help to me. I have been using it with increased frequency. I share it not only with others in my office, but other branches in my company. When technical application questions arise, having information compiled in one database is very useful. I really like having the ability to retrieve information like Technical Data Sheets and Material Safety Data Sheets with ease. The link to Lube Match is also a useful feature. I know the team developing the “Assistant” is continually loading more and more valuable information. With that in mind, I hope to be using Shell’s Virtual Assistant for years to come.

Joe Lasuen, A&I Distributors – Boise (US Distributor)

‘I have now used this tool a couple of times and I think it’s fantastic. It will be very beneficial for staff at depot level and will enable a much faster response to prospective customers.’

Gleaner Oils (UK Distributor)

‘Basic questions it answers very well, however when we are stuck it is usually a little more technical, and it struggles to assist, and we revert to the usual channels.’

Certas Energy (UK Distributor)
The Shell Virtual Assistant

- Lives in our Shell.com website and interacts with website visitors
- Built using Artificial Solutions’ Teneo Platform
- Interprets the meaning and context of free-format queries
- Has the intelligence to learn, reason, understand and apply this knowledge to real customer interactions
- Exhibits many ‘smart’ NLI capabilities such as:
  - Memory
  - Handles ambiguous inputs
  - Capable of performing fuzzy searches in the product catalogue given partial or incorrect names given by the user
  - Free-format, conversational inputs captured and interpreted to deliver actionable insight
PHASE 2 DEPLOYMENTS 2015/6

New Flows Added
- Product Application - hydraulic oils
- Product Application - compressor oils
- Product Application - transmission oils
- Shell Old to New

Global Solution
Separation of US and UK Solutions

New Country Roll Outs - Sept
- India “Lite” - India, Philippines, Singapore, Malaysia
  - Shelly
- Germany
  - Julia Wagner
  - Konrad Müller

New Country Roll Outs - Dec
- China
  - Xiaobei
- Russia
  - Maria - Мария
  - Sergei - Сергей
NATURAL LANGUAGE - DEPLOYED
DID IT MEET OUR GOALS....THE STATS

40% reduction in call volume to live agents

74% of issues successfully resolved

97.4% of questions correctly understood

98.8% of answers meet user expectations
THE FUTURE OF AI.

- Focus on further increasing intelligence, including:
  - Deploy in more countries / globally.
  - Proactivity based on personalization eg - up and cross selling
  - Broaden the knowledge base.
  - Cross selling and Upsell.
  - Proactive VA + possibly mobile.
  - Further develop failing gracefully techniques for KM gap
  - Further integration of other databases and services.

- Accepting that Natural Language will pervade, exploring new areas:
  - In-car integration – e.g. need oil, which oil, where to buy
  - At the pump – captive market, VA channel etc.
  - Virtual buddy / helper (Listening VA).
  - Will play a part in the next industrial revolution which will be a Cyber Physical world.
    (Industry 4.0, Internet of things and big data)
Links to VA pilots

- US:  www.shell.us/distributorassistant
- UK:  www.shell.co.uk/distributorassistant
- India:  www.shell.in/distributorassistant
- Malaysia:  www.shell.my/distributorassistant
- Singapore:  www.shell.sg/distributorassistant
- Philippines:  www.shell.ph/distributorassistant
- Germany:  www.shell.de/distributorassistant
- China:  www.shell.com.cn/distributorassistant
- Russia:  www.shell.com.ru/distributorassistant

Any comments on tool enhancements, pls use the VA feedback tool or send to the GTSU internal mailbox at:  PT-Shell-Virtual-Assistant@Shell.com

Please note that the VA is only accessible internally using Chrome
Questions
DISCOVER MORE AT WWW.SHELL.COM

youtube.com/shell
flickr.com/photos/royaldutchshell
shell.com/inside_energy
facebook.com/shell
@Shell on Twitter