Changing the Face of Distributor Engagement

Shell Virtual Assistant

Mark Raynes,

Technology Manager, Shell Global Solutions

April 2016

Copyright of Shell Global Commercial

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.

This presentation contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as ''anticipate'', ''believe'', ''could'', ''estimate'', ''expect'', ''intend'', ''may'', ''plan'', ''objectives'', ''outlook'', ''probably'', ''project'', ''will'', ''seek'', ''target'', ''risks'', ''goals'', ''should'' and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this presentation, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including potential litigation and regulatory measures as a result of climate changes; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. All forward-looking statements contained in this presentation are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional factors that may affect future results are contained in Royal Dutch Shell's 20-F for the year ended 31 December, 2015 (available at www.shell.com/investor and www.sec.gov). These factors also should be considered by the reader. Each forward-looking statement speaks only as of the date of this presentation, **[DATE]**. Neither Royal Dutch Shell nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this presentation. There can be no assurance that dividend payments will match or exceed those set out in this presentation in the future, or that they will be made at all.

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.

Copyright of Royal Dutch Shell plc

Contents

- 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.

Copyright of Shell Global Commercial

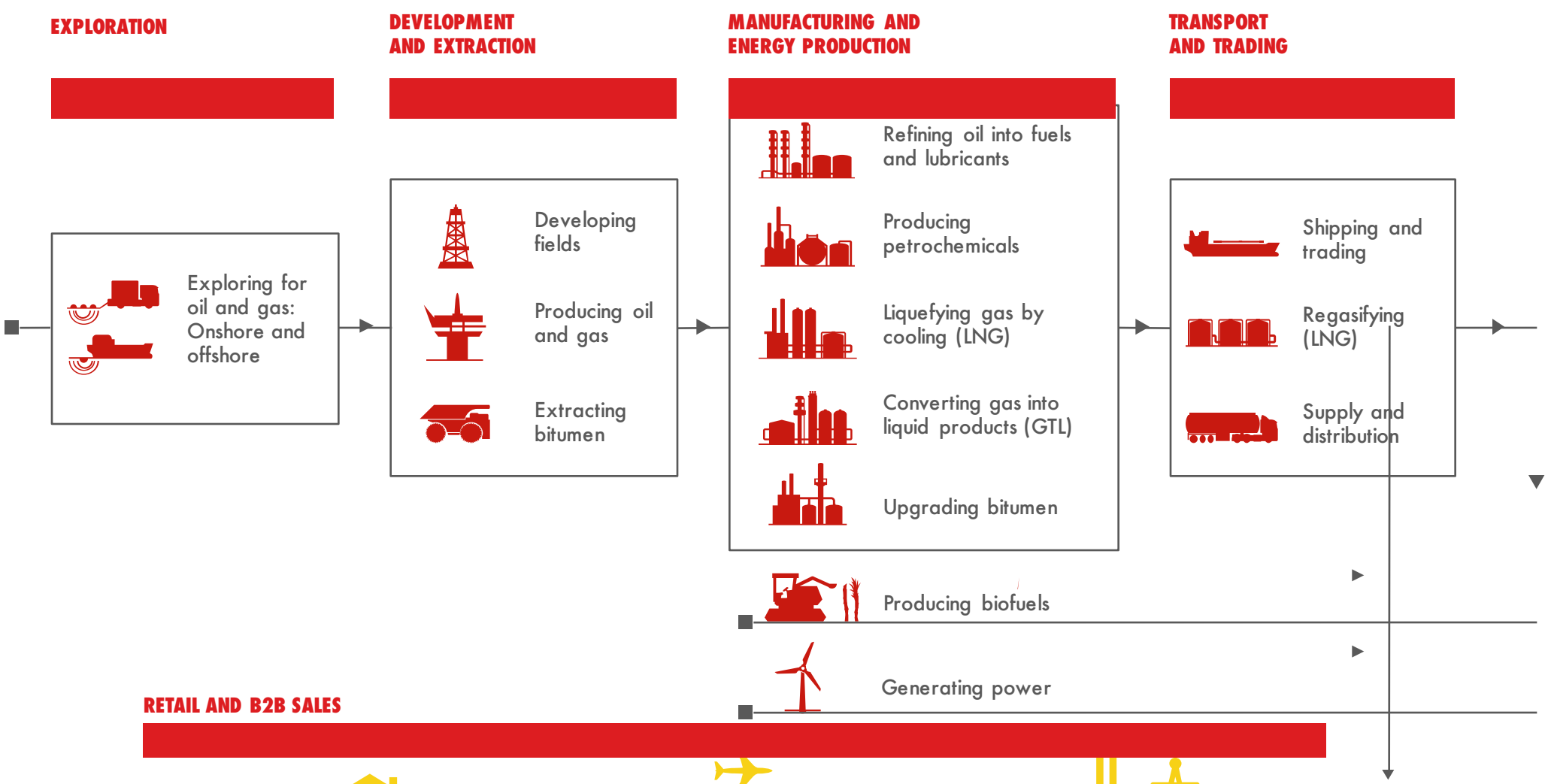
COMPANY PROFILE

- 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

Copyright of Royal Dutch Shell plc

BUSINESS OVERVIEW



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
- CO_2 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

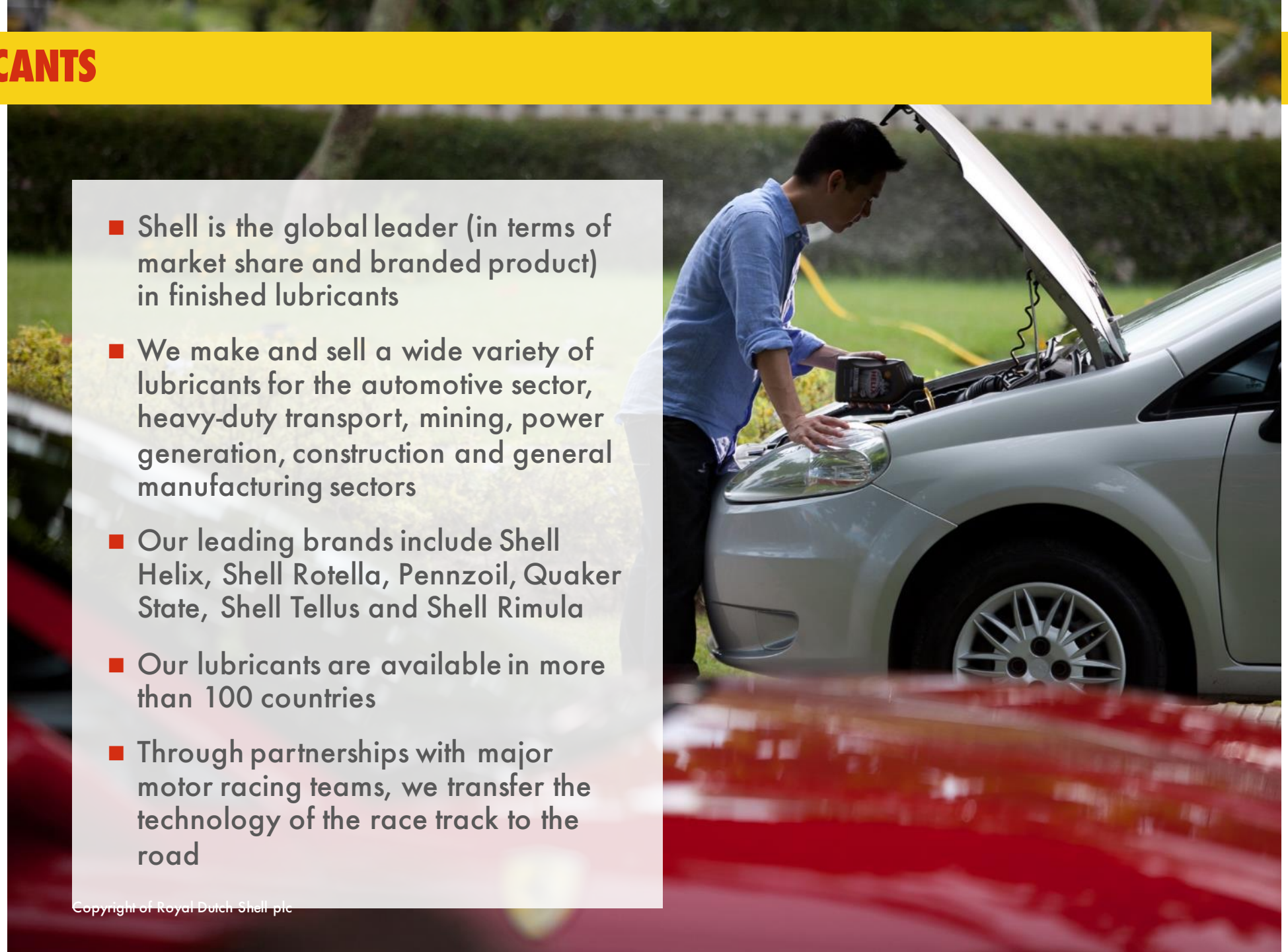
Copyright of Royal Dutch Shell plc

RETAIL

- 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

Copyright of Royal Dutch Shell plc

LUBRICANTS



- 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

Copyright of Royal Dutch Shell plc

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.

Copyright of Shell Global Commercial

CUSTOMERS & DISTRIBUTORS EXPECT SHELL TO PROVIDE TECHNICAL INFORMATION, ADVICE & SUPPORT*

Customer/Distributor needs information, advice or support

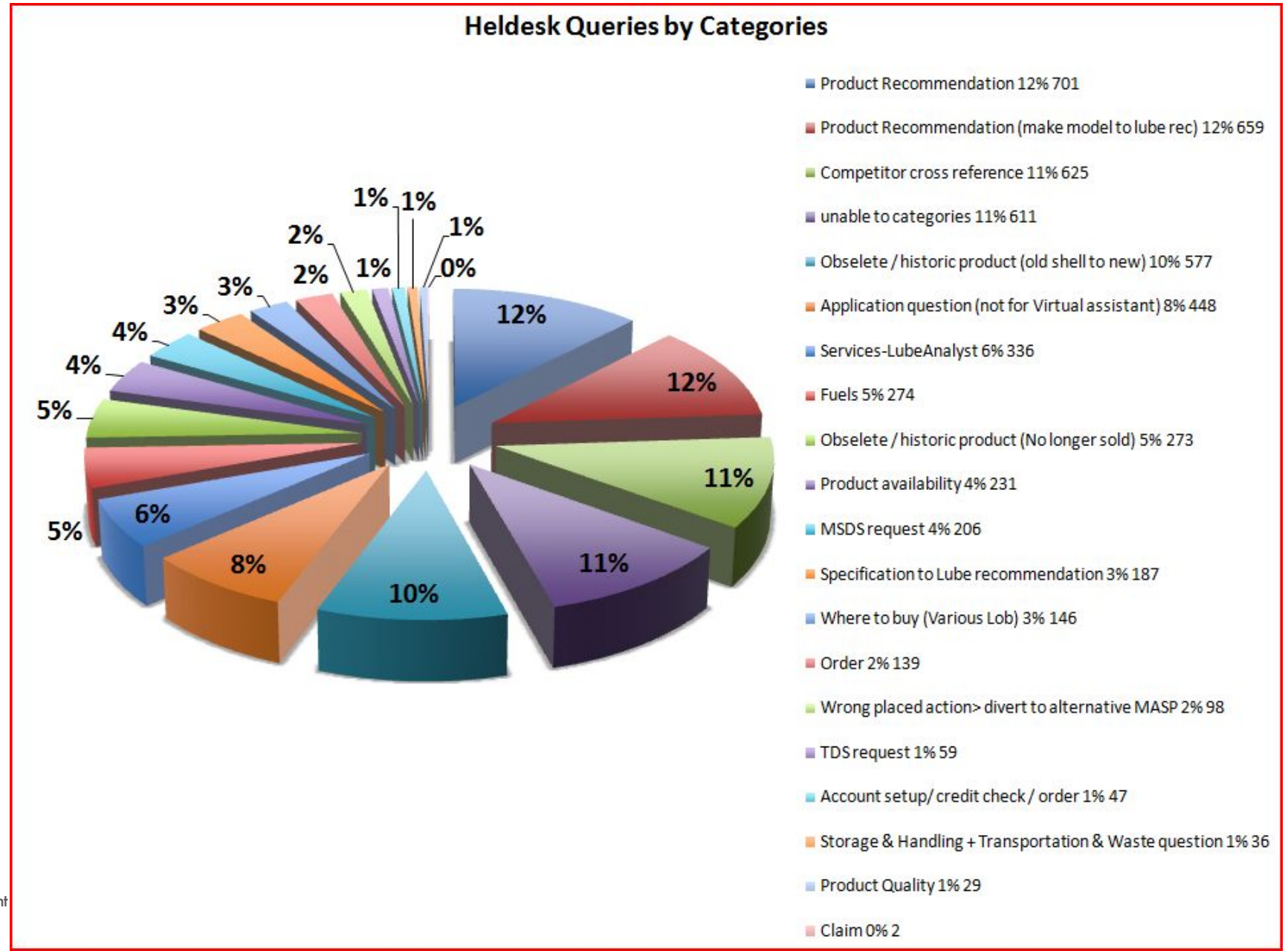
The spectrum of technical queries that Shell receives can be formed into 6 categories

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

Copyright of Shell Global Commercial

QUERIES BY CATEGORY



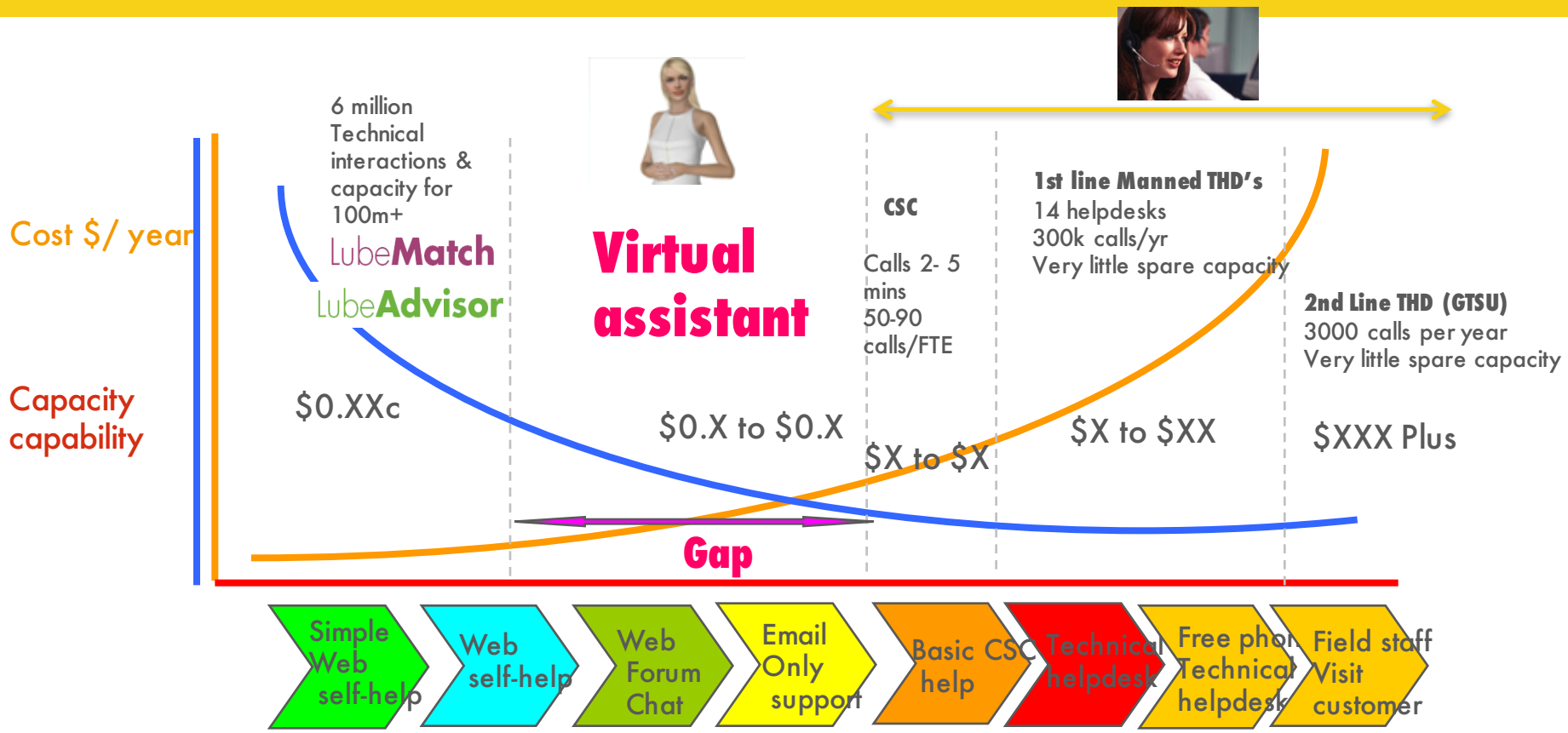
Copyright

THERE ARE 6 QUERY CATEGORIES & 28 QUERY TYPES

Documents	Recommend-ations	Availability	Properties	Product/ Application Advice	Complaints/ Other
1. Requests for TDS & MSDS 2. Requests for Certificates (COA, COC) 3. Requests for brochures/ DVRs	1. Product alternatives x-ref 2. LubeMatch queries 3. Product family queries 4. Product range info 5. Old Shell to new Shell product	1. Where to buy 2. Pack size availability 3. Product availability	1. Physical properties – general 2. Physical properties – extended 3. Test methods – standard 4. Test methods – complex 5. Specification info – basic 6. Specification info – complex 7. OEM approvals 8. Formulation-related query	1. Technical product query – simple 2. Technical product query – complex 3. Application query – simple 4. Application query – complex 5. Technical application query – simple 6. Technical application query – complex 7. LubeAnalyst report interpretation	1. Complaints 2. Misplaced actions (incl. complaints)

Copyright of Shell Global Commercial

HAVE A CLEAR STRATEGY & UNDERSTANDING YOUR BUSINESS



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.

Copyright of Shell Global Commercial

DEFINE THE COMPLEXITY OF THE REQUIREMENT

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.

Copyright of Shell Global Commercial

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

Copyright of Shell Global Commercial

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.

Copyright of Shell Global Commercial

HOW TO EVALUATE POTENTIAL VENDORS

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

Vitual Assistant functionality demonstration questions

Type of Question	legal involvement	Identity request	Authentication request for firewall bypass	Actual question asked by the customer	Interaction / process required	data source you need to interface with	Explanation of data fields provided	Correct anser / required action you should demonstrate
Basic Technical data sheet request for a technical datasheet (TDS) or Material safety data sheet (MSDS) normally a PDF or Word document in local language.		password access or secure server connection will be required to the GPC / EPC	Yes	1. I need a datasheet for a shell product. 2 I'd like a **TDS** / MSDS for Tellus hydraulic oil. 3. In English for the UK. Demonstrate a couple of examples, one using SP /GPC code, one using the product name and one for TDS and another for MSDS. You should also demonstrate how the virtual assistant can interact around the product type(lubricants, the type of product (hydraulic oil) and the viscocity so that it could ask which of say anumber of product choices (of Tellus) it could be. What would happen if the customer asked for TDS and MSDS in the same question, demonstrate this also. What would happen if the customer asked for two different product TDS's in the same question, demonstrate this also.	The system needs to find out what type of product the customer needs information on i.e Fuel, Lubricant, Bitumen, Gas or chemical, what application of product(Gear oil, hydraulic oil, coolant, engine oil etc), which viscocity is required (e.g. 5,15,32,46 etc) what country and laguage is required, which specific Tellus grade the customer wants a datasheet for and once it has successfully worked out the correct product it should then email the PDF for that product in a nicely scripted email which looks like it has come from a real person on the Shell Technical helpdesk or be signed from Lisa the virtual assistant. Is the customer knows the GPC or SP code for the product this should be a short cut through the questioning process and go straight t the answer.	See data for question 1 tab Internet (Public) View http://www.epc.shell.com/ Intranet (internal to Shell) View http://sww-gpcview.shell.com/	product materila or order code which the customer may know. **External name:** This is the full name of the product, the customer may know this but often misses the "Shell" or may get the suffixes wrong. They may only know the "Family name" (the Tellus bit only) in which case you can only offer them choices of product from which they would need to choose. **Product class:** Type of product say "Lubricant", "Fuel"," Bitumen", "Chemical", "Gas". **Country name:** this is the country that the product is available in. **Product sub group:** This is the type of product so "Hydraulic oil" or "Gear oil" etc. **SaleProd Country Stat:** This column tells you that the product is available in that specific country. **Pack Name:** This gives the name of the pack size that the product is available in (e.g 209 Litre drum). **Pack stat:** This must be "Active" to indicate that the pack is actually available. **Doc Language: This give the**	GPC or SP code: 0001D7747 Product type (Product class): Lubricant Type of datasheet: TDS Viscocity: ISO 15 Country : UK Language : English Product name : **Shell Tellus S2 V 15**
Product Brochure request		password access or secure server connection will be	Yes	I'd like a brochure for: example 1: LubeAnalyst example 2: Helix	To establish which brochure is required and if the results yield two or more options should the	Brand central url: https://www.brandcentral.shell.com/		

- Provide for each question example data / databases so the vendors can make demonstration examples for each.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VSHA1SH	Omala S2 G 460 Drum 209 L T/H RYtop (1) 001D7833002VSHA1SH SBStd StdLab (ZA
6	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VSHA227	Omala S2 G 460 Drum 209 L T/H RYtop (1) 001D7833002VSHA227 SBStd StdLab (Al
7	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VSHA227	Omala S2 G 460 Drum 209 L T/H RYtop (1) 001D7833002VSHA227 SBStd StdLab (Al
8	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VSHA246	Omala S2 G 460 Drum 209 L T/H RYtop (1) 001D7833002VSHA246 SBStd StdLab (AE
9	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VSHA246	Omala S2 G 460 Drum 209 L T/H RYtop (1) 001D7833002VSHA246 SBStd StdLab (AE
10	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VJ3A1WJ	Omala S2 G 460 Drum 55 Gal T/H RYTop (1) 001D7833002VJ3A1WJ SBStd StdLab (A
11	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VJ3A1WJ	Omala S2 G 460 Drum 55 Gal T/H RYTop (1) 001D7833002VJ3A1WJ SBStd StdLab (A
12	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833001176A03Q	Omala S2 G 460 No Packaging (BULK) 001D7833001176A03Q SBStd stdlab (No Pac
13	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833001176A03Q	Omala S2 G 460 No Packaging (BULK) 001D7833001176A03Q SBStd stdlab (No Pac
14	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VNAA1SH	Omala S2 G 460 Pail 20 L Plastic O/H Black (1) 001D7833002VNAA1SH SBStd StdLa
15	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VNAA1SH	Omala S2 G 460 Pail 20 L Plastic O/H Black (1) 001D7833002VNAA1SH SBStd StdLa
16	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VNAA246	Omala S2 G 460 Pail 20 L Plastic O/H Black (1) 001D7833002VNAA246 SBStd StdLa
17	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VNAA246	Omala S2 G 460 Pail 20 L Plastic O/H Black (1) 001D7833002VNAA246 SBStd StdLa
18	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VOMA1WJ	Omala S2 G 460 Pail 5 Gal Plastic O/H B (1) 001D7833002VOMA1WJ SBStd StdLab (
19	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AE	United Arab Emirates	Available - Generic	001D7833002VOMA1WJ	Omala S2 G 460 Pail 5 Gal Plastic O/H B (1) 001D7833002VOMA1WJ SBStd StdLab (
20	001D7833	Shell Omala S2 G 460	L	Lubricants	Industrial Lubricants	Factory Plant Maintenance Lubricants	Industrial Gear Oils	Industrial Gear Oils - Mineral	Industry General	Active - Generic	AL	Albania	Available - Generic	001D7833002VSHA246	Omala S2 G 460 Drum 209 L T/H RYtop (1) 001D7833002VSHA246 SBStd StdLab (AE

Copyright of Shell Global Commercial

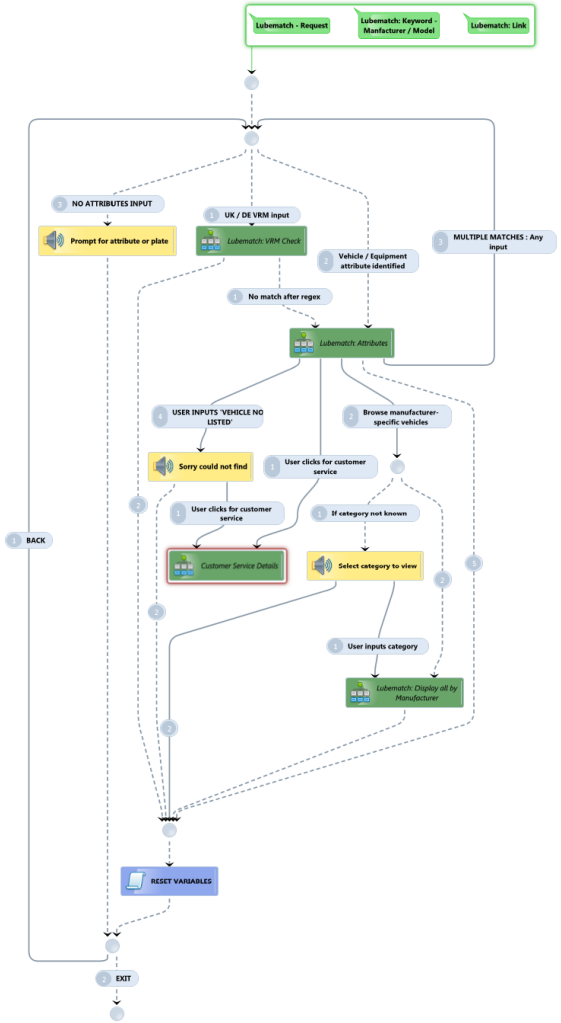
VENDOR RANKING

- 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.

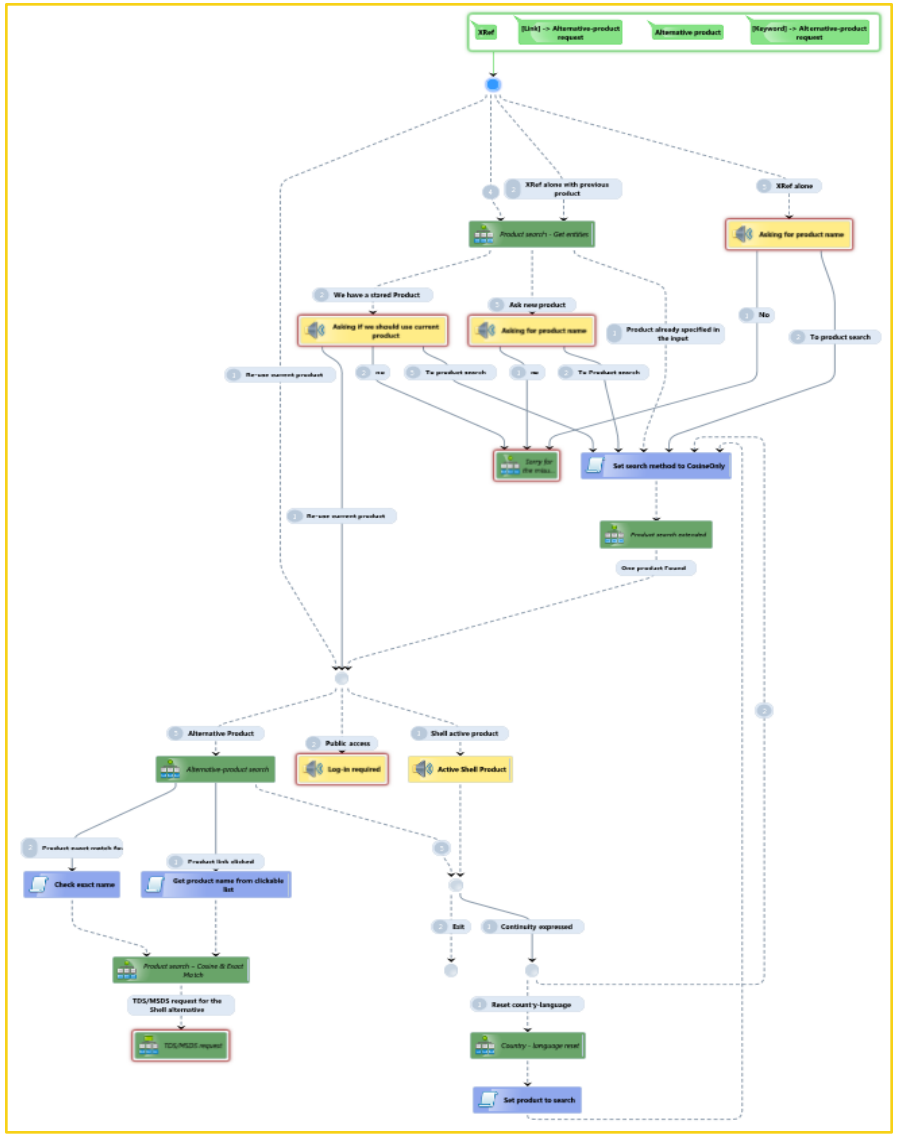
Section	Pilots + batch 1 & 2 deployments	Future	Elements of the Offer	Weight (1-10)	Company A	Company B	Company C	Company A	Company B	Company C
Business Issues	Pilot	Future	Business principles & ethics	10	3	3	3	30.0	30.0	30.0
			Business sustainability	10	3	8	7	30.0	80.0	70.0
			Resources support (implementation and support)	10	8	5	7	80.0	50.0	70.0
			Risk of customer & commercial influence	9	3	3	3	81.0	81.0	81.0
			Speed & cost of Implementation	10	5	1	8	50.0	10.0	80.0
			Investment in platform	8	6	3	8	48.0	72.0	64.0
			Resource capability	8	8	6	7	64.0	48.0	56.0
								0.0	0.0	0.0
	Not applicable		Commercial credibility Rating (D & B)	10				0.0	0.0	0.0
			Total cost of service (From RFQ)	8	5	6	8	40.0	48.0	64.0
			Total number of emloyees	6				0.0	0.0	0.0
			Implementation and deployment team size	7	7	7	7	49.0	49.0	49.0
			Office locations (world wide)	7	5	6	3	35.0	42.0	21.0
			R & D team size	7	7	5	6	49.0	35.0	42.0
								0.0	0.0	0.0
				110				614.5%	550.0%	624.5%
Branding	X		Conform with Shell brand guidlines	7	7	7	7	49.0	49.0	49.0
	X		Conform with Shell IT branding policy	7	7	7	7	49.0	49.0	49.0
	X		Conform with Shells Web deployment guidlines	9	7	7	7	63.0	63.0	63.0
				23				700.0%	700.0%	700.0%
Compliance	X		Supports windows and LINUX	9	8	8	8	72.0	72.0	72.0
	X		All components certified for a virtual server	7	8	8	8	56.0	56.0	56.0
	X		Non special data centre requirements	9	8	8	8	72.0	72.0	72.0
	X		Supports multiple processors on a muliple pocessor virtual server.	9	8	8	8	72.0	72.0	72.0
	X		Application supports data archieving	9	8	8	8	72.0	72.0	72.0
	X		Processor capacity can be dynamically added or remove on demand.	9	8	8	8	72.0	72.0	72.0
	X		Can use a share DBMS	9	8	8	8	72.0	72.0	72.0
	X		SAS	3	6	8	7	18.0	24.0	21.0
	X		Can support cloud facility for DR	3	1	8	1	3.0	24.0	3.0
	X							0.0	0.0	0.0
	X		Does not interfer with Green IT setups of the Mydesktop PC	9	8	8	8	72.0	72.0	72.0

DESIGNING TYPICAL QUESTION FLOWS

LubeMatch Flow



TDS/MSDS Flow



Copyright of Shell Global Commercial

VA - PILOT

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

Copyright of Shell Global Commercial

SHELL LAUNCHES AI-POWERED VIRTUAL ASSISTANT

Shell
United States

Careers | Media

Motorists | Business Customers | Energy and Innovation | Sustainability | About Us

You are in: Shell in the United States > Media > 2015 Media releases > Shell launches AI-powered service for Lubricant customers

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.

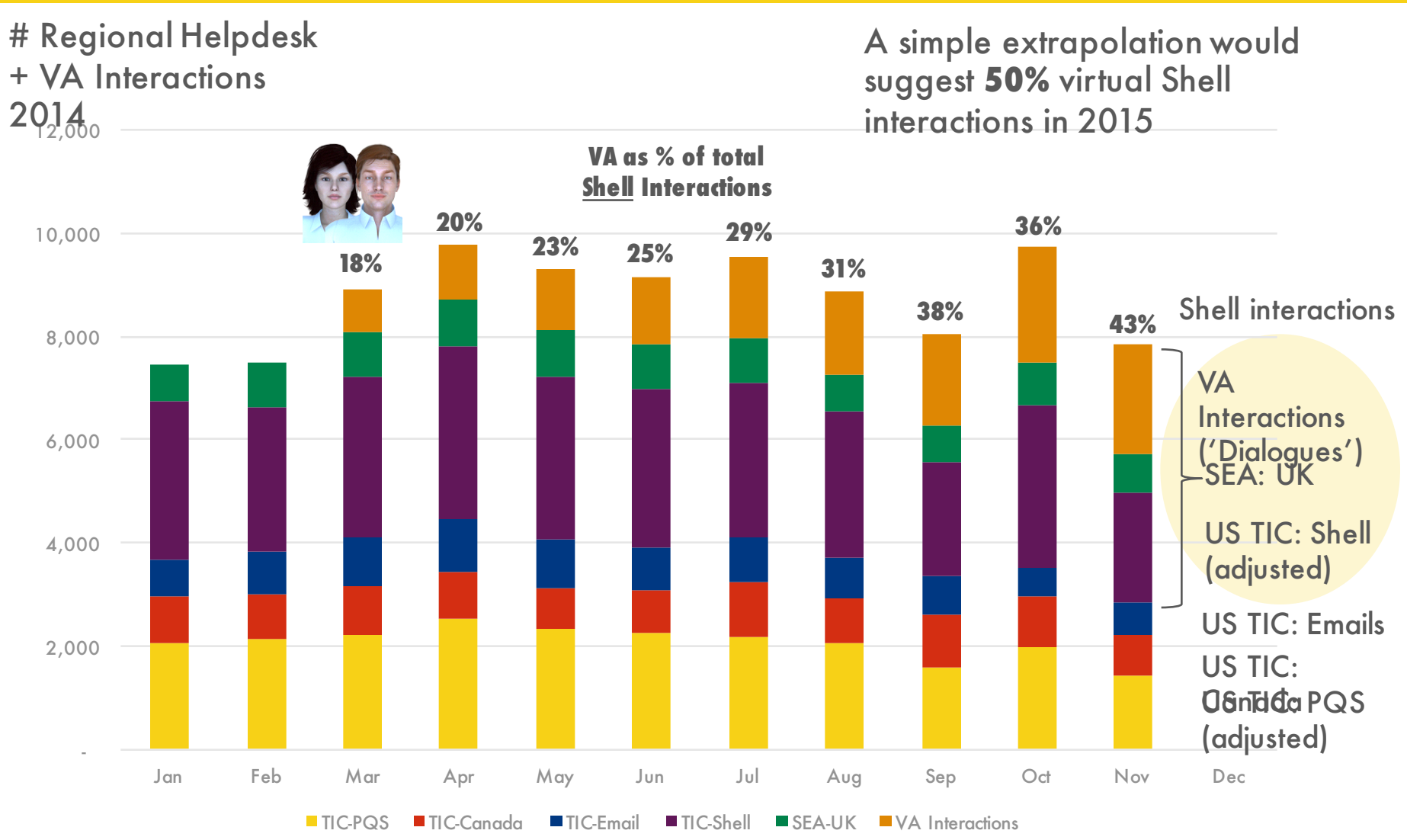
Customers and distributors type in their question via an online message window, and avatars Emma and Ethan reply back with an appropriate answer within seconds. The interaction is similar to a chat conversation, but instead of a live person on the other end, it is all done through artificial intelligence 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 and 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.

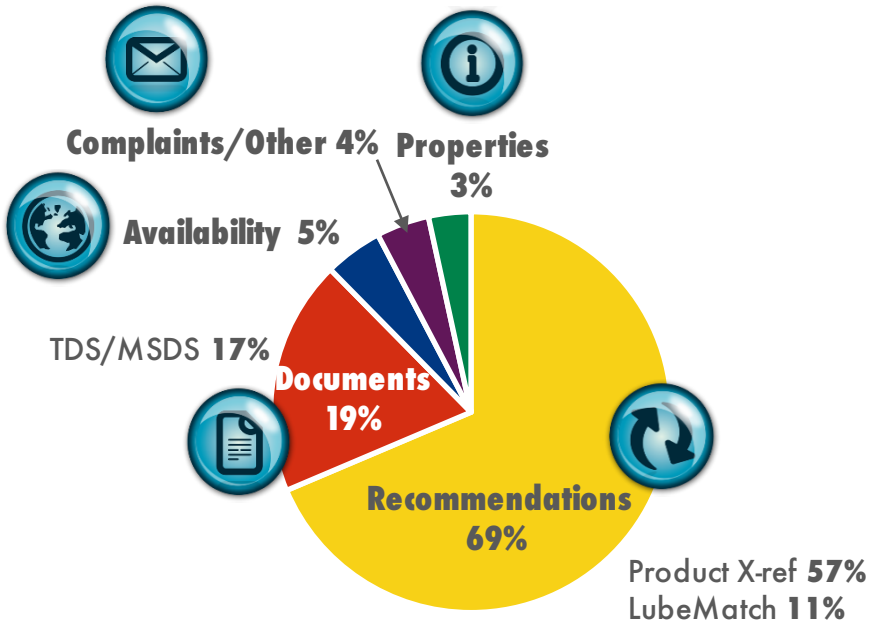
Copyright of Shell Global Commercial

VA Results: INTERACTIONS GREW CONSISTENTLY DURING THE 2014 US/UK PILOT

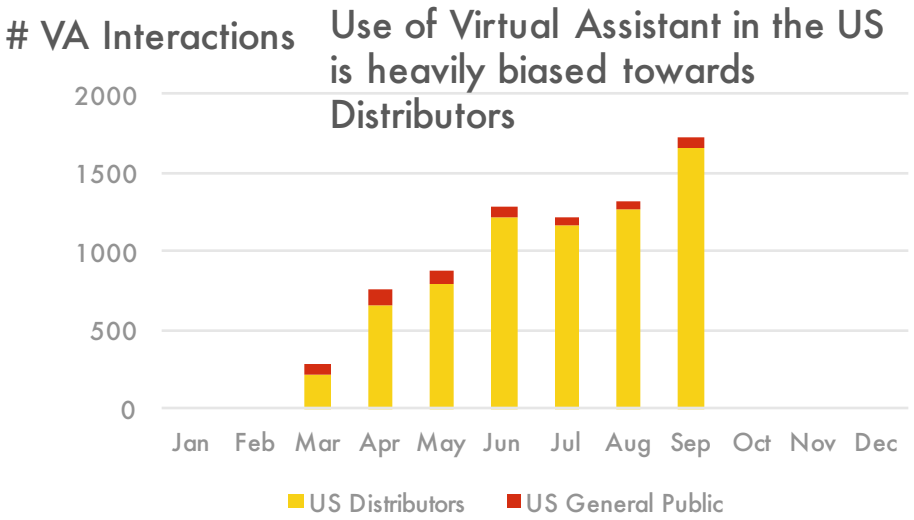


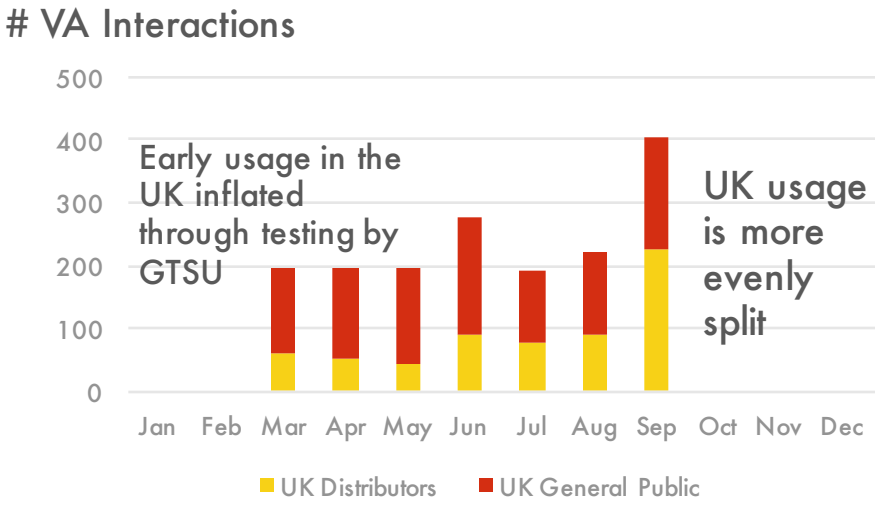
Copyright of Shell Global Commercial

88% OF VA INTERACTIONS ARE REQUESTS FOR PRODUCT RECOMMENDATIONS AND DOCUMENTS



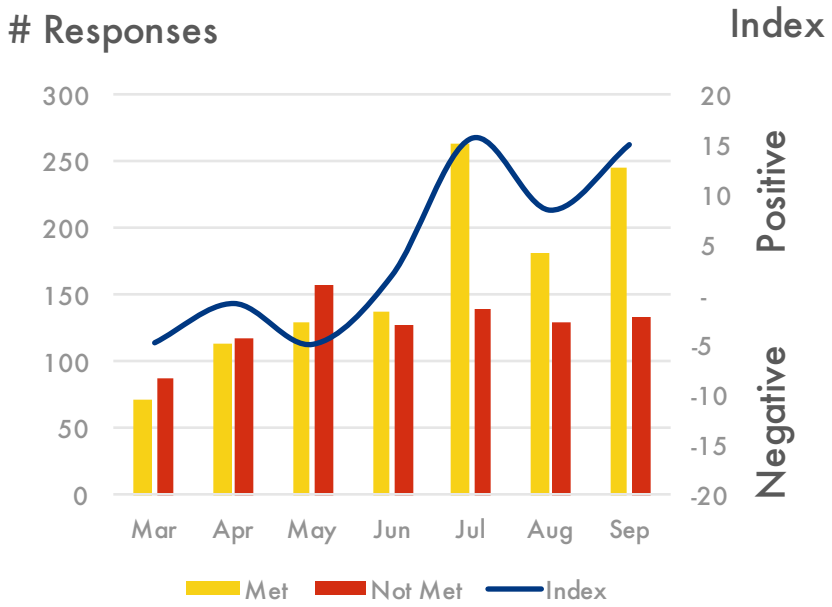
Based on 13,700 US/UK VA Interactions
1 Apr – 7 Oct 2014





Copyright of Shell Global Commercial

USER FEEDBACK HAS BEEN STRONGLY POSITIVE IN THE LAST THREE MONTHS OF THE US/UK TRIAL



'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, ands we revert to the usual channels.'

Certas Energy (UK Distributor)

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)

Copyright of Shell Global Commercial

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

Copyright of Shell Global Commercial

PHASE 2 DEPLOYMENTS 2015/6

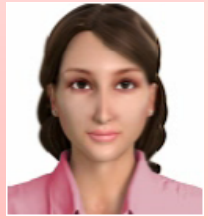
New Flows Added

- 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

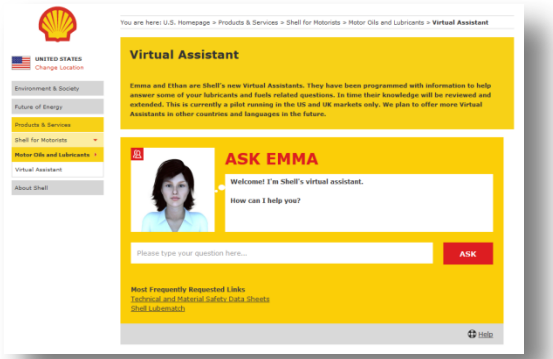
- **Russia**

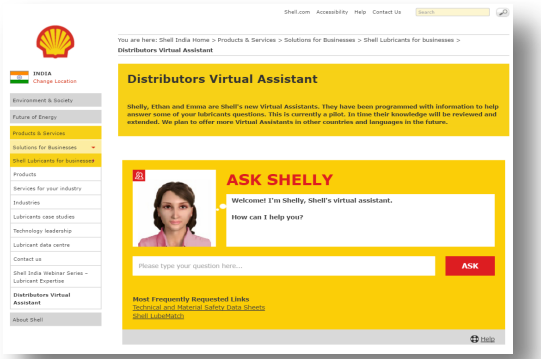
Maria - Мария

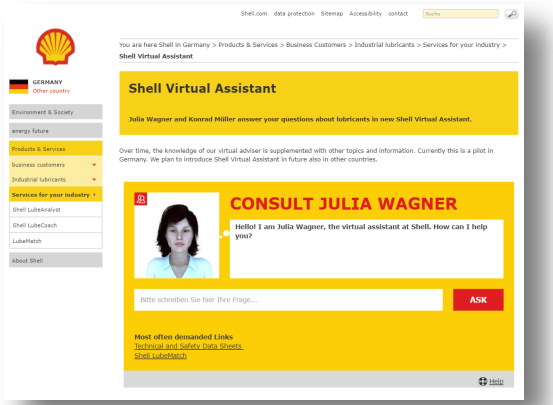
Sergei - Сергей

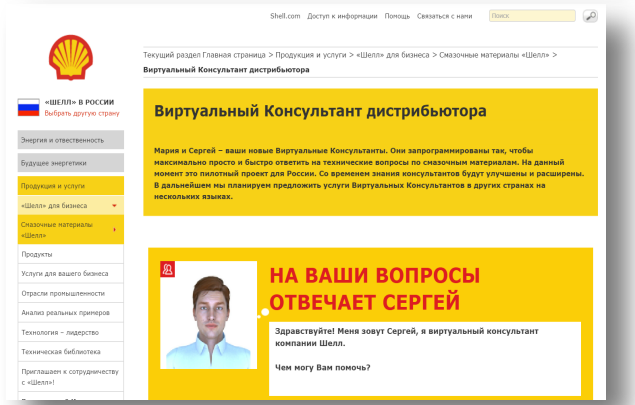
Copyright of Shell Global Commercial

NATURAL LANGUAGE - DEPLOYED







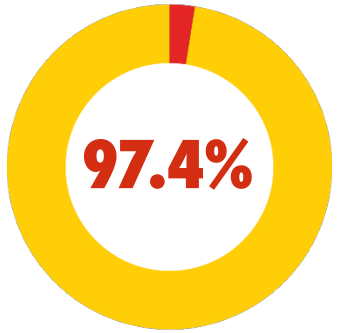


Copyright of Shell Global Commercial

DID IT MEET OUR GOALS….THE STATS

40% reduction in call volume to live agents

74% of issues successfully resolved



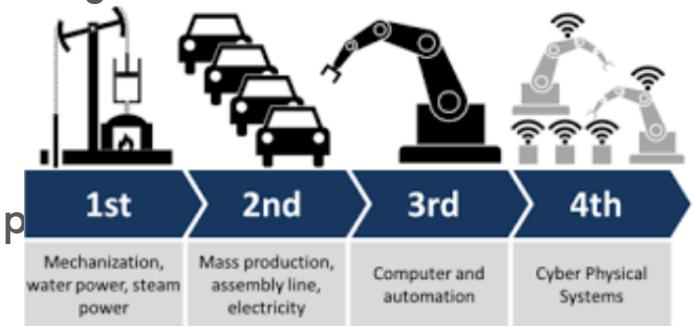
97.4% of questions correctly understood

98.8% of answers meet user expectations

Copyright of Shell Global Commercial

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)

Copyright of Shell Global Commercial

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

facebook.com/shell

flickr.com/photos/royaldutchshell

@Shell on Twitter

shell.com/inside_energy

Copyright of Royal Dutch Shell plc