Cigniti
Software Quality | Assured

Quality Assurance Managed Services Solution RFP

March 2021

Frontier
COMMUNICATIONS

Agenda

- Meet Our Team
- About Cigniti
- Solution Highlights & Cigniti Enablers
- Cigniti Qualifications
- Technical Experience
- Proposed Solution
  - Implementation Plan
  - Transition and Rebadging Approach
  - Staffing Plan
  - Innovation and Proprietary Tools
  - Efficiencies
- Appendix

Introductions

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President

Raghuram Krovvidy
EVP Global Delivery

Matthew Shapiro
Vice President, Sales

Octavio Garcia
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Ravi Sindri
Principal Manager

Goutham Pingle
Offshore Delivery Director

Sourabh Chongdar
Director Enterprise Solutions

Sujit Nair
Director Enterprise Solutions

About Cigniti

Corporate Overview

#1 *Quality Engineering and Digital Assurance Services Provider in North America*

Quality Engineering

Digital Assurance

Advisory & Transformation

2500+	150+	20+	22	50+	75+
Professionals	Active Customers	Years in Business	Customers in Countries	Fortune 500 Clients	Managed QA Services Engagements

BlueSwan — Align. Assure. Accelerate.

Cigniti's Next-Gen Software Testing Platform

Verita | Velocita | Praxia | CESA | INSta | Prudentia | Cesta | InCight

TMMi® FOUNDATION

Founding member and key contributor in developing Test Maturity Model integration (TMMi®) process framework

CMMI SVC /5 | ISO 9001:2015 | ISO 27001 | ISO 13485:2016 Certified | AICPA SOC

ISG® | Everest Group From insight to action. | FORRESTER® | NelsonHall | Gartner

"Niche Player" Gartner Magic Quadrant | **"Leader" in NEAT chart NelsonHall** | **The Forrester Wave™: Continuous Testing Service Providers** | **"Major Contender" Everest Group PEAK Matrix™**

Frontier Objectives & Cigniti Enablers

Frontier Objectives and Cigniti Enablers

01 Align the organization with current industry trends and standards in software testing	○ Quality assurance model that incorporates best practices and industry trends including shift left and shift right principles and is integrated throughout the development and deployment process ○ Founding Member and key contributor in developing Test Maturity Model integration (TMMi®) process framework and defining key testing standards
02 Agility to adapt testing to project prioritization changes and fast-moving initiatives	○ Establish a cross-functional, collaborative environment ○ Implementing collaborative planning across the key projects ○ Effective change and risk management practice ○ Core-flex staffing model with ability to scale as needed
03 Scalability to support multiple releases and testing efforts with ease	○ Core-Flex staffing model with ability scale as needed to support multiple releases and testing efforts ○ Bench strength of 250+ certified career testers to support QA demands ○ Bench resource shadowing in projects for low cost & accelerated resource onboarding
04 Advance the QA into cutting edge tools, people, and process	○ Access to as needed to support multiple releases and testing efforts ○ Cigniti next gen testing platform BlueSwan™ – Accelerate test efforts through use of cutting edge tools and techniques around AI/ML, Predictive modelling etc.
05 Acceleration of test planning and execution to support faster overall SDLC delivery to align with executive and consumer expectations in the industry	○ Continuous testing approach incorporating all elements of shift left and shift right principles including building automated testing pipeline ○ Implement dual shift techniques including requirements ambiguity testing, automated code profiling, automated functional and non-functional testing etc.) to accelerate test planning, execution, and reporting
06 Improved Test coverage, traceability and execution for all types of system testing	○ Extensive catalog of services for functional and non-functional testing, quality engineering services, digital assurance services etc. ○ Frameworks to maintain traceability and track test coverage ○ Best practices in test design techniques to improve and ensure optimal test coverage

Frontier Objectives and Cigniti Enablers

07 Move to an automated first approach with manual execution as a last resort	○ Successfully delivered 150+ test automation engagements ○ Dedicated Automation Test Center of Excellence for Test Automation Framework Standardization, End-to-end test automation framework for UI, API, Data, Backend tests across multiple technologies, Automation Suite Development, Execution & Maintenance, Test Automation Feasibility, Prioritization and ROI analysis to implemented automated first approach for Frontier ○ Focus on early and in sprint automation
08 Integrate with DevOps CI/CD integration processes and within the organization	○ Well-established frameworks for implementing CI/CD enabled testing pipeline ○ Pre-built integrations with DevOps and ALM tools such as JIRA, Jenkins, Spotfire, etc.
09 Metrics, Reporting, and Visibility through KPIs at all stages of testing and for all levels of the organization	○ BlueSwan™ Verita – Role based Quality Engineering Dashboard with 150+ metrics ○ Comprehensive view of key metrics such as Defect Trends, Cost of Quality, Productivity, User Experience Sentiment, Return on Investment (ROI), Test Coverage, Test Execution Cycle Time, Release and Quality Compliance
10 Partner with FTR to drive cultural change for QA but also with other areas of the organization	○ Well defined Change Management process to drive organizational culture of quality with focus on key impact areas, communication management, planning and training, formalized QA policies and processes, establishing formal quality controls and continuous improvement practice
11 Keep the quality of our customers experience, and our business applications as priority #1.	○ Cigniti's BlueSwan™ InCight and CESA tools for analyzing customer experience ○ Continuous user experience monitoring framework

Cigniti Qualifications

Cigniti Qualifications – Managed Testing Services

75+ **Successful enterprise-wide Managed QA transformations**

Leader in Quality Engineering, AI, and Continuous Testing capabilities

(NEAT) chart 2020

			Key Frontier Objectives																				
			QA Transition	Resource Rebadging	SLA based delivery	Align with industry trends	Improved QA Visibility	Accelerated test planning & execution	QA Advancement (people, tools & processes)	QA expansion across portfolio	Automation – First Approach	QA integration with CI/CD	Agile and Shift-left testing	Improved customer experience	Test Data & Environments	Integration/Progression Testing	Data Migration/ Scrub Testing	Regression Testing	Performance Testing CoE Setup	User Acceptance Testing	Data Migration/ Scrub Testing	Security Testing	Ad-hoc / Usability Testing	Defect triage and Test Documentation	Continuous Improvement
Virgin media	A leading CSP company offering Fibre broadband, digital TV, landline phone and mobile services	Duration: 5+ years Peak Team Size:35+	✔		✔	✔	✔	✔	✔		✔	✔	✔	✔		✔	✔	✔		✔		✔	✔	✔	✔
MTN	A multinational mobile telecommunications company	Duration: 3+ years Peak Team Size: 20+	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔		✔	✔	✔
CABLE ONE	An American broadband communications provider	Duration: 4+ years Peak Team Size: 30+	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔	✔	✔	✔		✔	✔
Southwest	One of the World's leading Airlines	Duration: 5+ years Peak Team Size: 178	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Atom bank	UK's first digital only bank without branches	Duration: 5+ years Peak Team Size: 60+	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔			✔	✔	✔
WM WASTE MANAGEMENT	American environmental services company	Duration: 3+ years Peak Team Size: 75+	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SUBWAY	A leading Quick Serving Restaurant	Duration: 4+ years Peak Team Size: 40+	✔		✔	✔	✔	✔	✔		✔	✔	✔	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔	✔

Technical Experience

Cigniti Technical Experience – Technologies

Technologies	Resource Strength		Key Clientele
	Total	Bench	
OSS systems – Ericsson, Blue Planet AMDCOS, Netcracker, etc. (15+ Engagements)	250+	20	CenturyLink, verizon, Cable One, Virgin media, Cox Automotive, Carestream Dental
BSS systems – Sterling, Salesforce, Sigma, Ericsson, AMDOCS, etc. (25+ Engagements)	400+	32	verizon, OPTUS, MTN, Cable One, Academy Sports+Outdoors, OMEGA, PRA Health Sciences
Digital Experience – Sitecore, Adobe, BMC, etc. (20+ Engagements)	300+	24	BROADCOM, MAVENIR, TOYOTA, BANK OF AMERICA, AUTODESK, conEdison, NEORA
Customer Management – Pega, Avaya, Genesys, etc. (25+ Engagements)	450+	36	OPTUS, Virgin media, BANK OF AMERICA, DELTA DENTAL, Atom bank, TOYOTA, J.B. HUNT, Rabobank
Middleware and APIs – TIBCO, Apigee, MuleSoft, etc. (40+ Engagements)	250+	20	GTL The Power of Together, AUTODESK, Johnson & Johnson, IHG, SYNOVUS, ALFA INSURANCE, shutterstock, Petplan
ERP systems – Infor, SAP, Oracle, Dynamics 365, etc. (70+ Engagements)	500+	40	MAVENIR, GTL The Power of Together, Southwest, DIGITAL REALTY, AUTODESK, PIONEER NATURAL RESOURCES, EXCHANGE
EDW – Oracle, Teradata, MongoDB, etc. (150+ Engagements)	450+	36	OPTUS, MTN, LG&E KU PPL companies, CHASE, ATD American Tire Distributors, QANTAS, RAC, Johnson & Johnson
ETL, BI & Reporting - Informatica, Tableau, MS BI, SAP BO, etc. (150+ Engagements)	250+	20	GTL The Power of Together, SYNOVUS, Atom bank, SUBWAY, J.B. HUNT, OPTUM, shutterstock

Cigniti Technical Experience – Tools

Tools	Resource Strength		Relevant Experience
	Total	Bench	
Scriptless automation tools – AccelQ, TOSCA, Parasoft, etc. (150+ Engagements)	650+	52	
Cross browser testing tools – Sauce Labs, BrowserStack, AWS DeviceFarm, etc. (120+ Engagements)	250+	20	
Performance testing tools – JMeter, NeoLoad, LoadRunner, etc. (85+ Engagements)	95+	10	
Project Management tools – Jira, ALM, TFS, etc. (250+ Engagements)	500+	40	
Continuous Integration tools – Jenkins, CircleCI, TFS, etc. (150+ Engagements)	450+	36	
API Automation tools – Postman, SoapUI, Parasoft, etc. (250+ Engagements)	450+	36	
Analytics & Visualization tools – Spotfire, Qlik, Tableau, etc. (50+ Engagements)	300+	24	

Proposed Solution

Solution Summary

Resource rebadging

3-Year Staffing plan for Frontier

Proprietary transition framework

Cigniti's IP and tool partnership to drive QA transformation

Comprehensive QA managed service implementation plan

Managed Services Efficiencies

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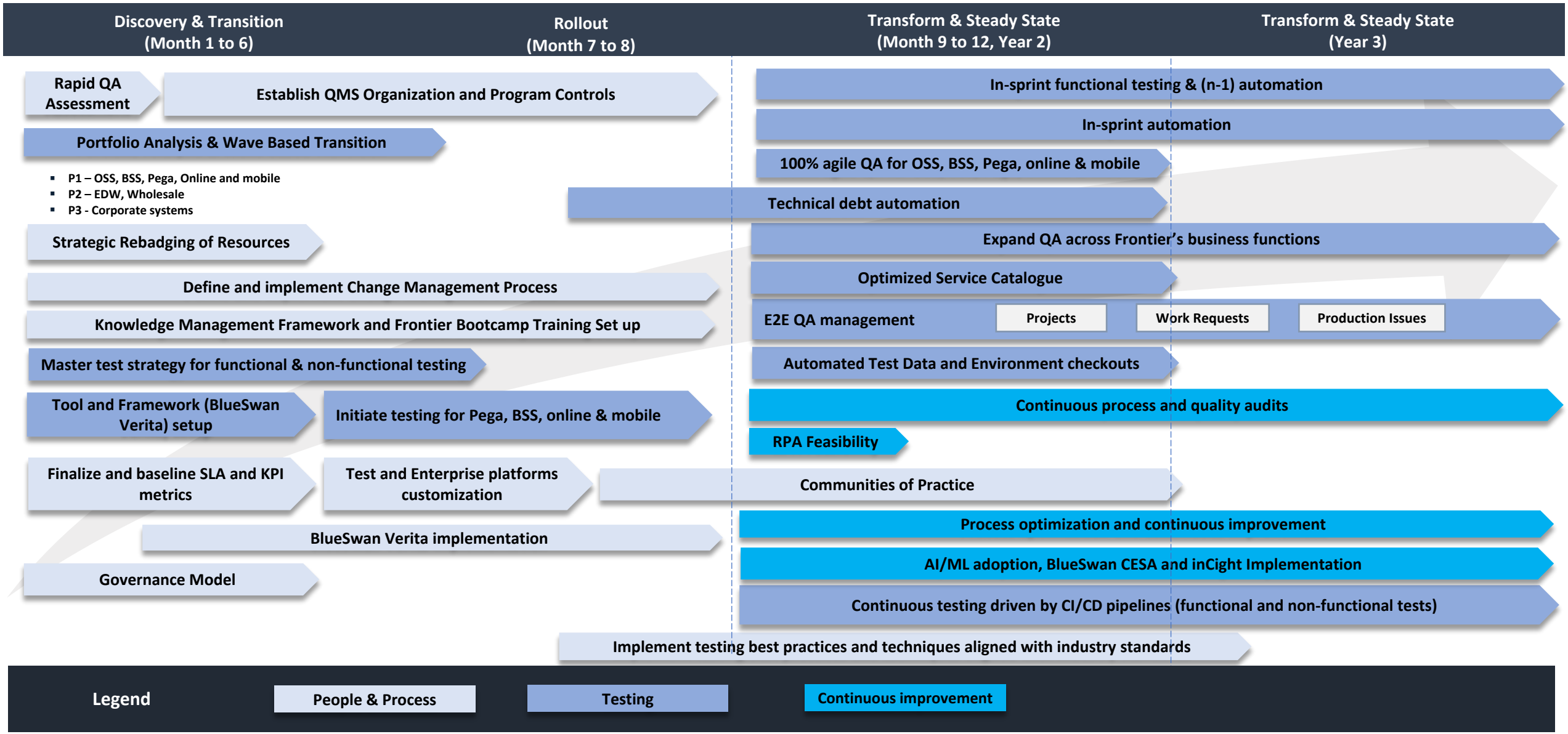
Managed Testing Services Implementation Plan for Frontier



Transition Overview

Key Objectives

- Minimal Disruption to the BAU
- Optimized team composition
- QA alignment with Frontier's business goals
- Comprehensive portfolio analysis
- QA Expansion

Pre-Transition

- Publish and present discovery plan to Frontier
- Publish a plan to maintain BAU operations
- Develop program transition blueprint
- Publish communication and governance model for the program
- Publish comprehensive KT and workshop schedule
- Initiate offshore connectivity and access
- Run Frontier 101 certification program
- Review rebadging requirements
- Identify change impacts and risk

Wave 1	Pega, OSS, BSS
Wave 2	Online & Mobile, EDW
Wave 3	Corporate Systems, Wholesale, others

★ *Progress Checkpoint*

Knowledge Acquisition & Employee Rebadging (Month 1 to 5)

Knowledge Transfer

- Prioritize applications for wave-based transition
- Onboard team based on the transition plan
- Initiate knowledge acquisition of applicaitons
- Understand SDLC and STLC processes including tools, release schedules etc.
- Leverage reverse engineering tools to address risks from insufficient documentation
- Build knowledge maps
- Publish knowledge acquisition scorecards
- Define industry standard processes and methodologies, as required
- Define and roll out change management process

Shadow Support

- Pair with identified resources on current testing activities
- Setup tools, and frameworks as required
- Participate in end-to-end QA operations for BAU including BSS, OSS and Pega
- Identify dependencies and prepare a resolution plan for future test activities
- Publish reverse shadow plan
- Publish transition progress metrics

Transition Governance

Employee Rebadging

Identify resources to support KT ▶ **Fitment Analysis** ▶ **Finalize critical resources** ▶ **Approval & Payroll Transfer**

- Resource Dependency
- Knowledge and Skills
- Compensation details

- Architects
- SMEs

★ ★ ★

Independent Program Execution Month 6

- Own end-to-end QA activities in collaboration with rebadged resources
- Initiate automation for Wave 1 and 2 applications
- Seek feedback through reviews and implement course correction as necessary
- Identify resource requirements and publish onboarding and training plan for steady state
- Provide transition status and go-forward plan to Frontier leadership
- Transition signoff

Rebadged resources support E2E QA services

Key Outcomes

- Managed Services Operating Model
- SLAs and Metrics
- Test Accelerators and Frameworks
- Enterprise Automation Roadmap

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Resource Rebadging Process

QA Head and HR Manager

Collaborative Model

- Employee rebadging will be performed as part of the transition phase
- Identify the need for rebadging of existing FTEs, contractors to ensure zero impact on the BAU operations
- Discuss and finalize resources for rebadging

Principal Manager and HR Business Partner

Key Drivers

- Experience
- Product knowledge
- Domain knowledge
- Contractual Obligations

Critical Resources

- Technical Architects
- SMEs
- Leads

Gather contractor details to initiate Rebadging process

- Need for critical resources and their key areas of expertise
- Number of key resources (identified by Frontier and Cigniti) to be rebadged
- Understand the cultural and knowledge gaps
- Gather payroll and compensation details
- Understand legal and HR compliances
- Publish rebadging plan

Assess and Identify contractors for rebadging

- Assess identified resources based on their below skills and fitment to the project:
  - Technical and Domain Skills
  - Project dependencies
- Understand resources' career goals and objectives
- Explain the change and impact of the changes
- Walkthrough Cigniti's employee benefits program and expectations
- Publish milestones and assessment plan to measure the success of rebadging

Resource on-boarding and team stabilization

- Release offer of employment
- Publish team structure with defined roles and responsibilities
- Initiate Cigniti resource on-boarding induction program
- Provide project access (knowledge portal, tools, test suite etc.) to the rebadged employees
- Knowledge sharing sessions between Cigniti QA team and rebadged contractors
- Support E2E ongoing managed QA

Cigniti Staffing Plan for Frontier

Business Functions	Team Onboarding during Transition					YoY Team Structure		
	M1	M2	M3	M4	M5	Year 1	Year 2	Year 3
Pega	10	9	5	4		28	21	18
OSS	7	7	4	2		20	17	15
BSS	6	8	4	2		20	16	15
Online & Mobile	0	3	1	0	2	6	8	8
EDW	0	2	2	0	2	6	7	7
Corporate Systems	0	0	3	3		6	6	6
Wholesale & Others	0	0	3	2		5	6	5
Automation (Centralized Team)	4	1	4			9	9	11
Total	27	30	26	13	4	100	90	85

Team Structure

Year 1	QA Manager	5	Automation	29
	Domain SME	3	Performance	9
	Manual Testing	45	Security	9

Year 2	QA Manager	5	Automation	36
	Domain SME	3	Performance	9
	Manual Testing	28	Security	9

Year 3	QA Manager	5	Automation	43
	Domain SME	3	Performance	9
	Manual Testing	16	Security	9

BlueSwan™ for Frontier QA Transformation

Cigniti's IP BlueSwan™

BlueSwan
Align. Assure. Accelerate.

Cigniti's Next Gen Proprietary Platform to Accelerate Frontier's Quality Transformation

Verita

Quality Engineering Platform and Dashboard with Predict Capabilities

Praxia

Process Accelerator Platform for QE, Agile, DevOps Transformation

Velocita

Enterprise test accelerator hub for digital transformation

InCight

Holistic customer Experience Assurance Platform

iNSta

AI-based intelligent test automation platform

Cesta

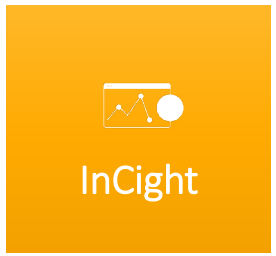
Test asset migration platform

Implementation Plan → **Configure** → **Customize** → **Stabilize** → **Expand** → **Continuous Improvement**

Integration with Frontier's Landscape

Frontier Technologies	BlueSwan™ Integration					
	Verita	iNSta	Velocita	InCight	Cesta	Praxia
OSS systems – Ericsson, Blue Planet AMDCOS, Netcracker, etc.	✓		✓	✓		✓
BSS systems – Sterling, Salesforce, Sigma, Ericsson, AMDOCS, etc.	✓	✓	✓	✓	✓	✓
Digital Experience – Sitecore, Adobe, Online, Mobile, etc.	✓	✓	✓	✓	✓	✓
Customer Management – Pega, Avaya, Genesys, etc.	✓	✓	✓	✓	✓	✓
Middleware and APIs – TIBCO, Apigee, MuleSoft, etc.	✓	✓	✓		✓	✓
ERP systems – Infor, SAP, Oracle, Dynamics 365, etc.	✓	✓	✓	✓	✓	✓
EDW – Oracle, Teradata, MongoDB, etc.				✓		✓
ETL, BI & Reporting - Informatica, Tableau, MS BI, SAP BO, etc.	✓		✓			✓

Integration with Frontier's Landscape

Key Objective	BlueSwan™ Solution	QA Integration	Key Benefits
Increase speed and accuracy of testing		▪ Custom implementation as per Frontier's technology towers ▪ Intuitive dashboards for Test Governance Office ▪ Metrics for functional and non-functional tests ▪ Integration of quality gates across SDLC ▪ Automated alerts for quality benchmark deviations ACCELQ, APACHE JMeter™, POSTMAN, SoapUI, NeoLoad, TIBCO Spotfire, Selenium, SAUCELABS	AI powered **defect prediction** and **false-positives identification**
DevOps QA			**CI/CD integration** and real-time tracking of build quality and approval-based deployments
Improved visibility across QA progress			**Centralized and comprehensive** view of cost, quality and speed
Optimum Test Coverage			**100% functional test coverage** through bidirectional traceability
Reduce production defect leakage			**<2%** of defect leakage into production
Customer Centricity		▪ Continuous monitoring of customer feedback and satisfaction for Frontier's digital applications ▪ Orchestrate feedback loop from production to lower environments NeoLoad, TIBCO Spotfire	**Superior customer experience** for digital applications (web and mobile)
Test Accuracy and Optimum Test Coverage			**Customer-centric** test strategies to strengthen the regression suite

Integration with Frontier's Landscape

Key Objective	BlueSwan™ Solution	QA Integration	Key Benefits
Increase speed of testing	Velocita	▪ Framework integration across all technology towers ▪ Unified framework for online and web applications ▪ Embed shift-left testing across SDLC models ▪ **Script conversion** to open source tools ▪ Automated impact analysis for business as usual applications ▪ Orchestrate software bots for business critical operations ▪ Adoption of **AI and self-healing** for automation ACCELQ, Apache JMeter™, POSTMAN, SoapUI, NeoLoad, TIBCO Spotfire, Selenium, SAUCELABS	**30 – 40% faster** test cycles through adoption of AI and enterprise automation
DevOps QA	iNSta		**100% DevOps QA** for Priority 1 applications – OSS, BSS, Pega, Online and Mobile
Align with current QA trends and standards			**Intelligent and Automation First** approaches to drive QA organization
Expand test automation coverage	Cesta		**>85% automation** coverage for Priority 1 applications – OSS, BSS, Pega, Online and Mobile
Expand QA to support multiple releases			**Unified automation** frameworks for web, mobile (iOS and Android), APIs and DB validations
Operational Excellence across the QA organization	Praxia	▪ **Custom QA assessments** on a periodic basis ▪ **Agile/DevOps readiness** frameworks for thorough due-diligence of people, process and tools	**2x faster** quality transformation through 2000+ process assets
Matured QA (Tools, people and processes)			**≥ 4** TMMi maturity rating for the QA organization

Cigniti Tool Partnership Benefits to Frontier

Cigniti leverages its strategic tool partners to perform tool feasibility and identify best fit tools for Frontier's Technology Enhancements.

Frontier Current tools stack

ACCELQ	Test Automation
SoapUI / POSTMAN	API Testing
SAUCELABS	Cross-browser testing
APACHE JMeter™ / NeoLoad	Performance Testing
TIBCO Spotfire	Testing Metrics

Tools for Frontier's Technology Enhancements

Se / Tricentis	Test Automation
UiPath	Robotic Process Automation
headspin	Digital experience testing
GenRocket	Test data automation
VERACODE	Application Security testing
QuerySurge	ETL & Data Migration Automated testing

Tool Partnership Advantages

1. Cost-effective licensing models
2. Early access to beta releases
3. No-cost tool Proof of Concept as a value add
4. Custom trainings & certifications for QA team
5. Access to Cigniti's certified resources for all leading tools

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TCO Reduction and Efficiency Gains through Cigniti's MTS Solution

01 **COST**

- Optimized staffing model (onsite vs offshore resources)
- Optimized QA team sizing (manual vs test automation resources
- Effort reduction through use of Cigniti IP (jump start kits, accelerators, utilities etc.)
- Improved productivity (test cases authoring productivity, test cases execution productivity etc.
- Improved test efficiency and effectiveness (lower defect slippage etc.)
- Productivity gains through optimized knowledge management

02 **SCALE**

- Reusable test automation assets
- Reusable process assets
- Resource utilization gains

03 **SPEED**

- Improved released velocity through continuous testing pipeline
- Improved time to market through end-to-end automation
- Optimized and risk-based regression testing techniques

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Thank You

Appendix

Customer Sentiment Analysis – MyFrontier Mobile App

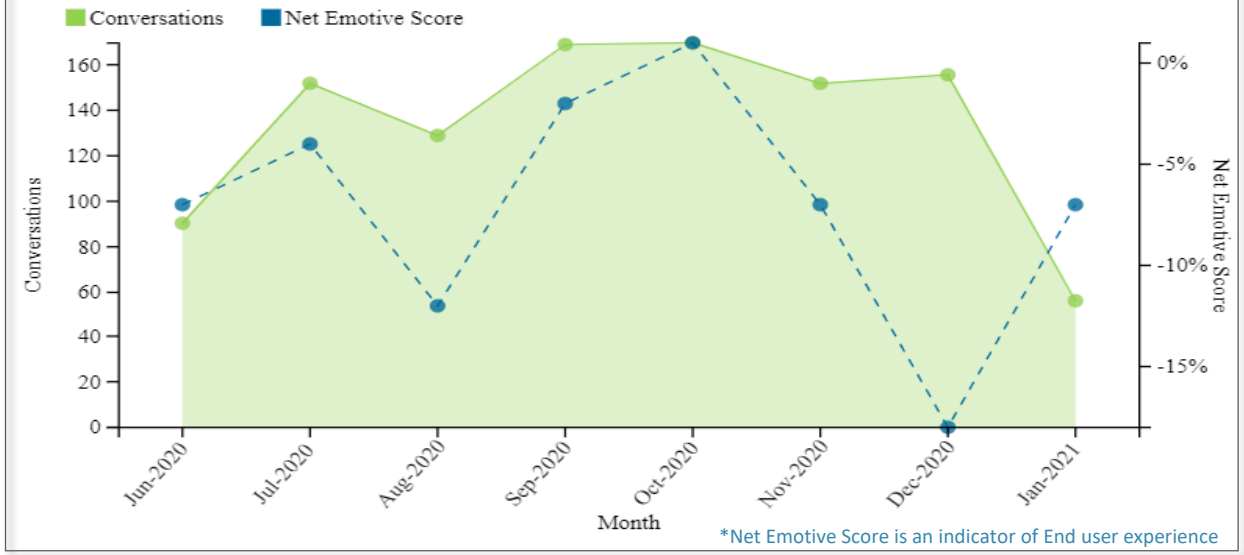
Sentiment Analytics

Analysis Summary

1.2	21,676 Total
1.6	412 Analysed
1.5	1,074 Conversations

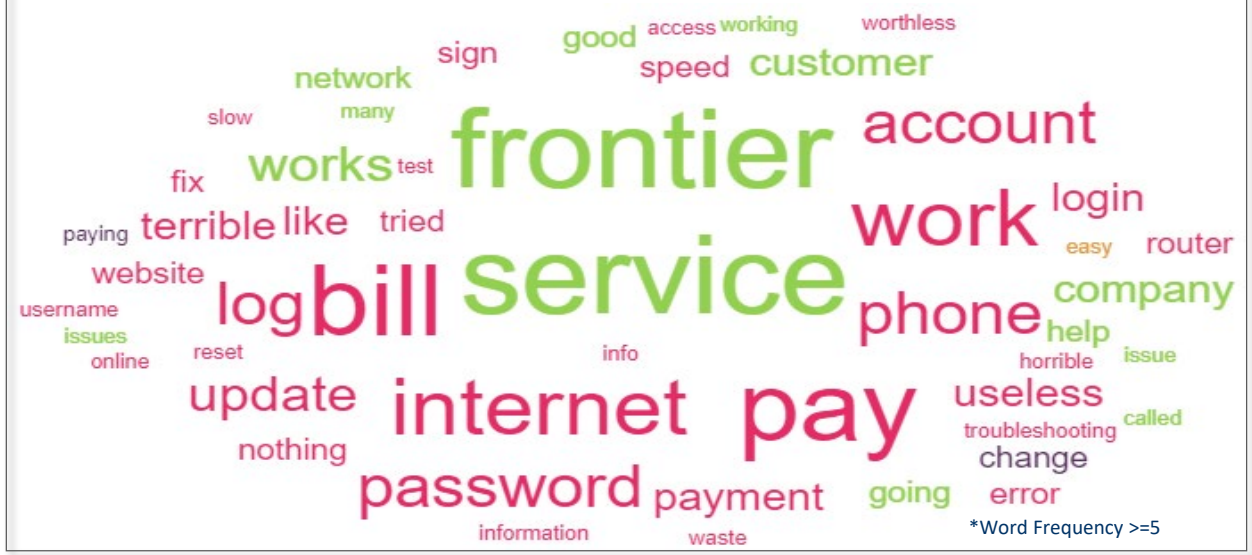
	Actual Reviews		Conversations	
5	5,328	25%	62	6%
4	1,332	6%	23	2%
3	1,332	6%	46	4%
2	1,574	7%	106	10%
1	12,109	56%	837	78%

Conversations Trend



*Net Emotive Score is an indicator of End user experience

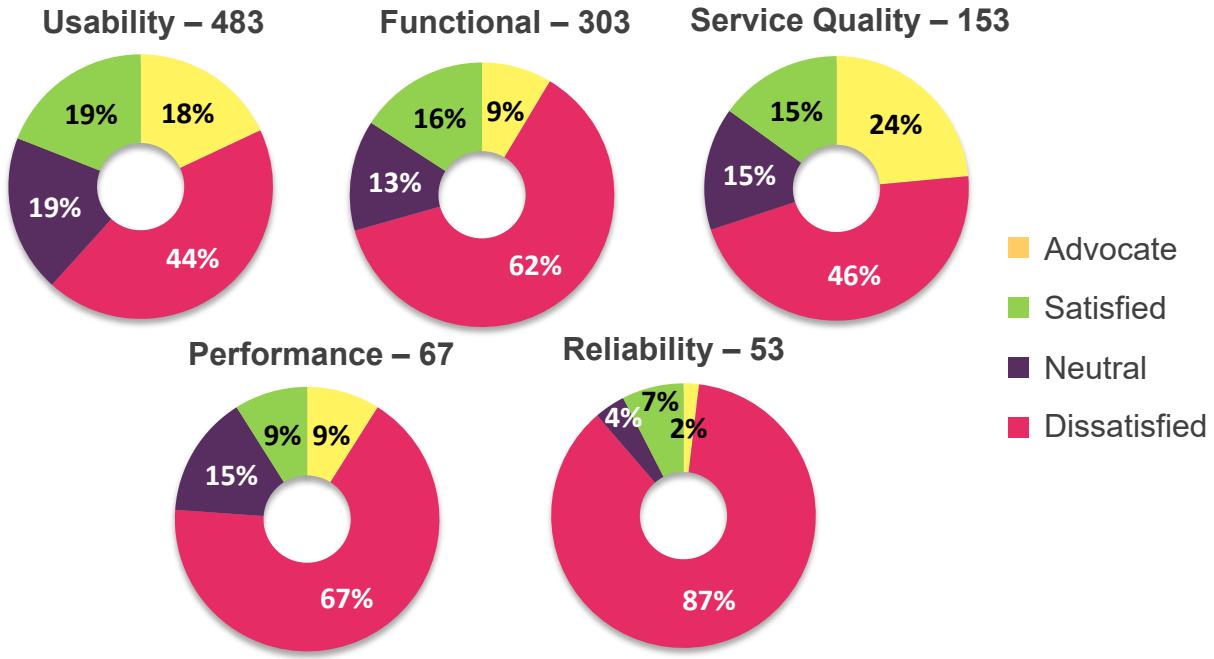
Word Cloud



*Word Frequency >=5

Key Takeaways

Sentiment Distribution by Categories



User Experience

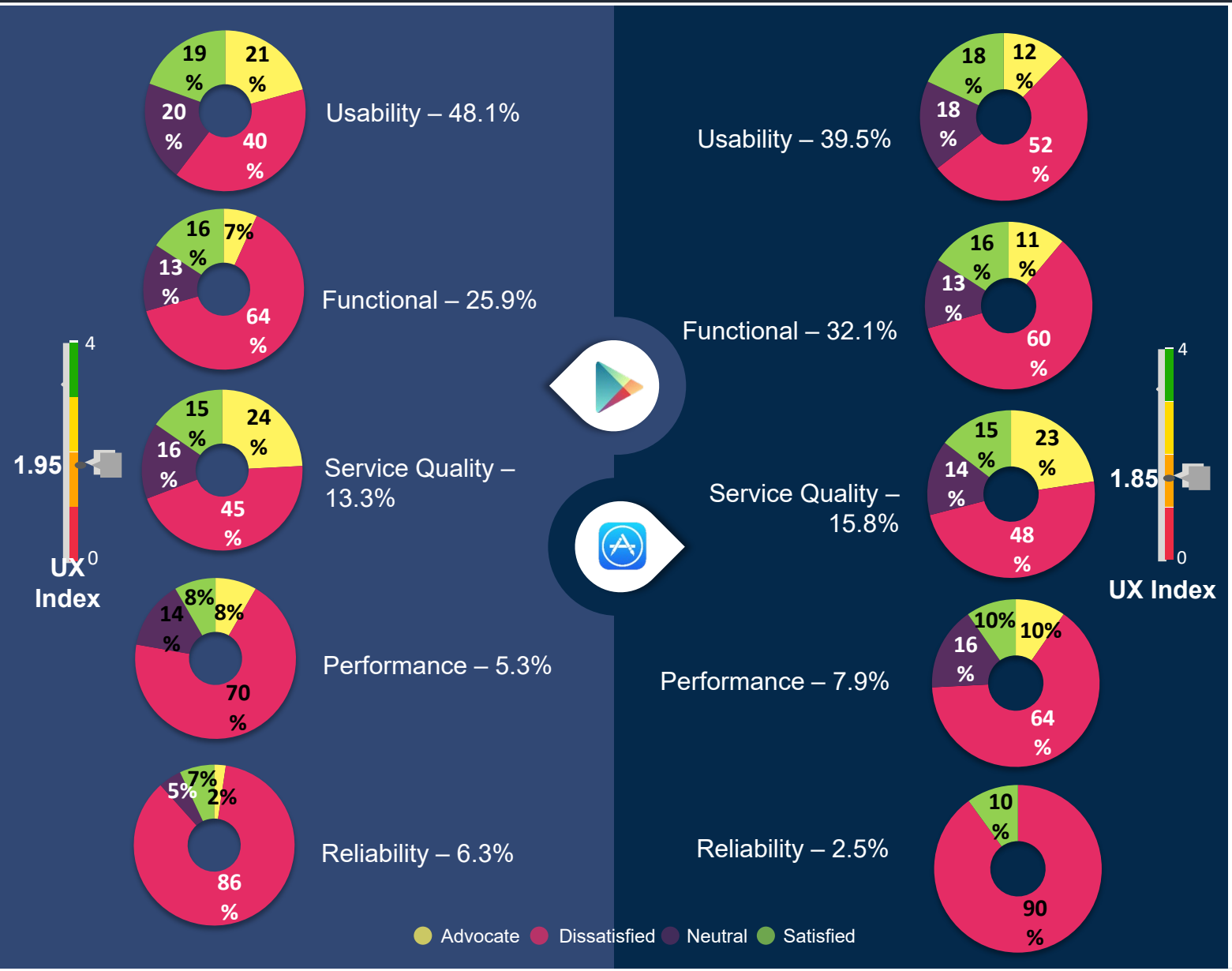
Continue to monitor

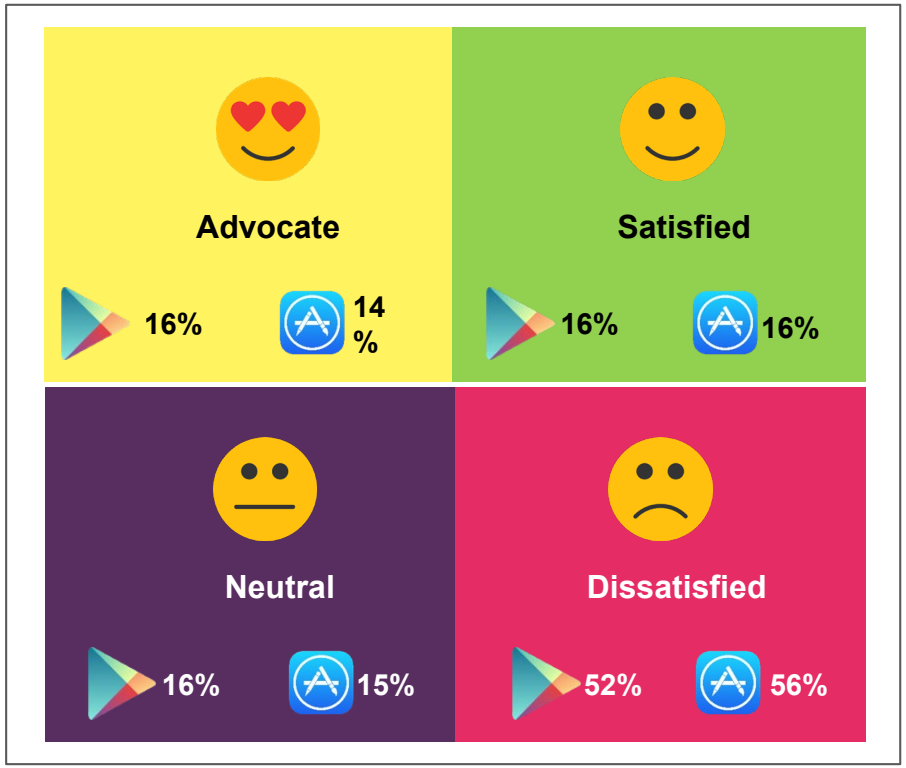
1. Usability
2. Service Quality

Continue to Focus on

1. Functionality
2. Performance
3. Reliability

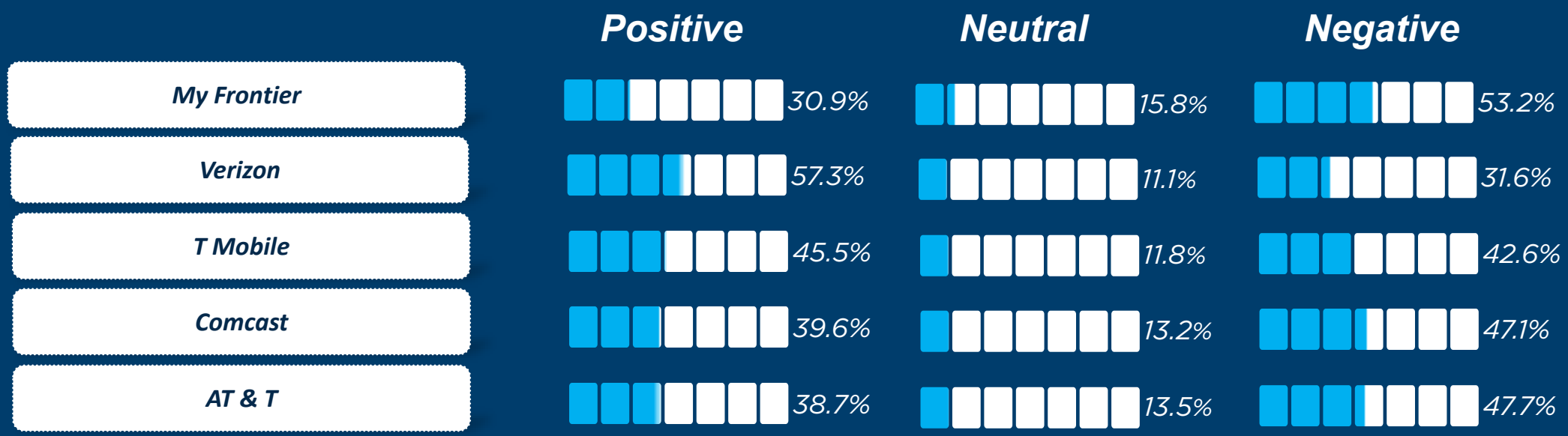
Store Comparison





Play store users have better user experience when compared with Apple store users

Conversation Distribution



Bugs – 25.6%

Suggestions – 6.9%

Version Update – 7.5%

Uninstalled – 2.5%

Others – 81.2%

Customer Service – 11.9%

Payment – 6.3%

Devices– 1.6%

Connectivity – 8.5%

- Majority of the Negative emotions are focused on “Service, Payment, Login”

SAMPLE Bugs & Suggestions

Bugs	Review Date	Topic
Cannot get through sign in despite changing the password.	20/01/2021	Functional
Can't access my network on the app.	19/01/2021	Functional
Service stops every couple days and frontier does nothing to fix it	11/01/2021	Functional
I needed to update my autopay info & could not do so using the app.	23/12/2020	Functional
There was a speed test that was unable to determine the router speed as the app could not access my router.	23/12/2020	Usability
Crashes when I click on a recent phone number to block it.	03/11/2020	Performance
I cannot stream videos, I cannot download anything it always fails	16/12/2020	Functional

Suggestions	Date	Topic
Would be nice if you could report an issue through the app, or communicate with the company	12/11/2020	Functional
Why add features that look good on paper but do nothing but slow the app down and make it buggy	23/06/2020	Functional
Also, Why is there no option to enter a payment amount?	23/06/2020	Functional
Dont think it's fair for a loyal customer to be paying $3 dollars every time to make a payment	22/05/2020	Functional

Commercials

Pricing Summary

Time and Materials

Year 1

$6,268,059

Onsite

30 : 70

Offshore

Investments

$5,012,750

Fixed Pricing

Year 1

$6,515,352

Onsite

30 : 70

Offshore

Year 1

$5,767,044

Onsite

25 : 65

Offshore

Year 1

$5,237,364

Onsite

21 : 64

Offshore

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