IT Strategy

TECHNOLOGY MISSION

Structure & Team → Innovation Process → Self-Service, STP, Ubiquity

Vision 2025

Existing & New Products / Services

Internal Customers
- Business
- Operations
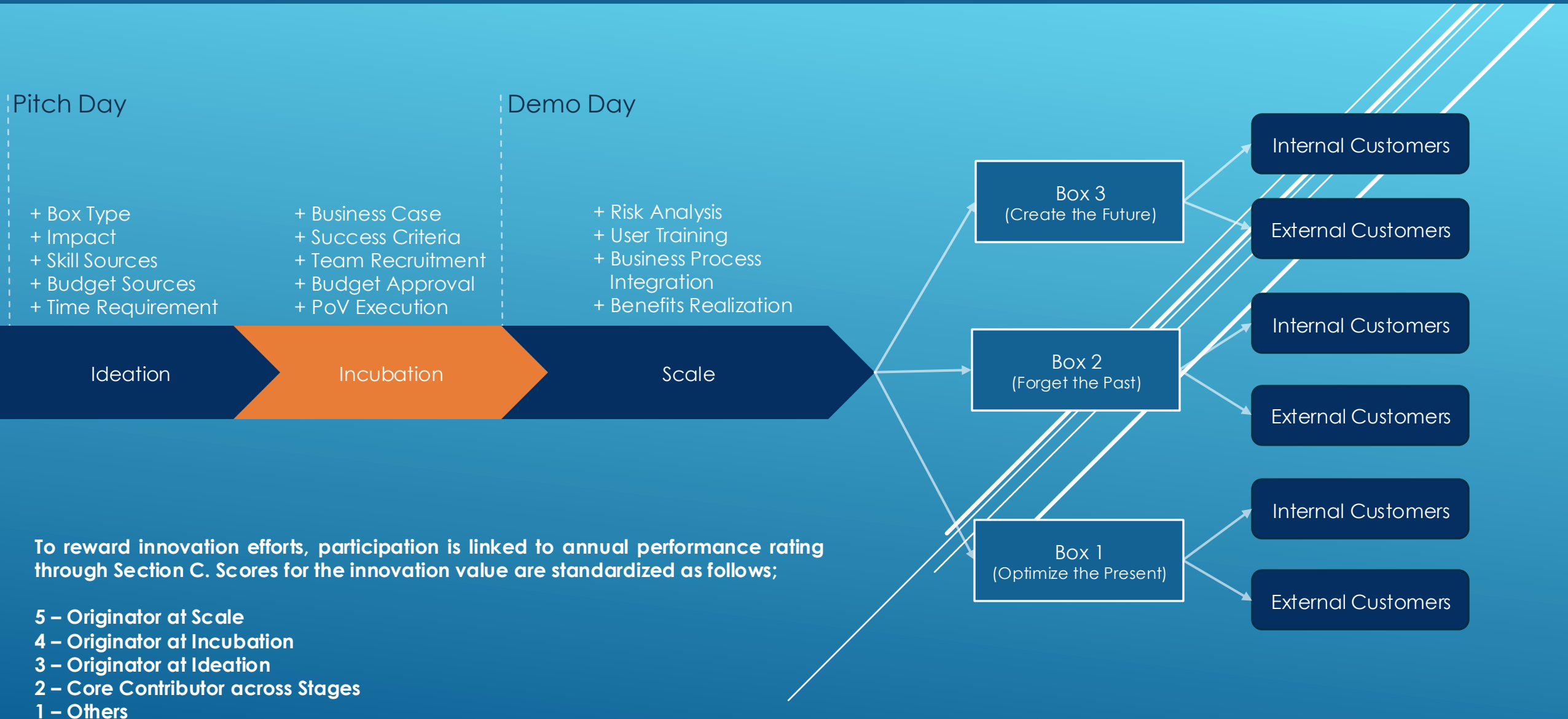- Others

External Customers
- Employers
- Members
- Others

In order for the Fund to achieve its 2025 objectives (20T, 1d TAT, 95% CSAT), the technology leadership must work towards the following:
> Build a well aligned structure and team
> Executing through a defined innovation process
> To deliver self-service, straight through processing, and ubiquity for existing and new products / services
> For both external and internal customers needs

Based on this technology mission, there are 4 Key Performance Indicators to viciously monitor; Innovation Index, Self-Service Index, STP Index, and a Ubiquity Index. These are the priorities that should determine resource allocation. Progress on these must outpace the 2025 timeline by at least 5 years to ensure that the Fund has a long-enough runway with the right technology towards 2025.

UNPACKING INNOVATION

Pitch Day

+ Box Type
+ Impact
+ Skill Sources
+ Budget Sources
+ Time Requirement

+ Business Case
+ Success Criteria
+ Team Recruitment
+ Budget Approval
+ PoV Execution

Demo Day

+ Risk Analysis
+ User Training
+ Business Process Integration
+ Benefits Realization

Ideation → **Incubation** → **Scale**

To reward innovation efforts, participation is linked to annual performance rating through Section C. Scores for the innovation value are standardized as follows;

5 – Originator at Scale
4 – Originator at Incubation
3 – Originator at Ideation
2 – Core Contributor across Stages
1 – Others

Box 3
(Create the Future)

Box 2
(Forget the Past)

Box 1
(Optimize the Present)

Internal Customers

External Customers

Internal Customers

External Customers

Internal Customers

External Customers

INNOVATION PIPELINE

Box 3 — 3 — Create the Future

Box 2 — 5 — Selectively Forget the Past

Box 1 — 2 — Optimize the Present

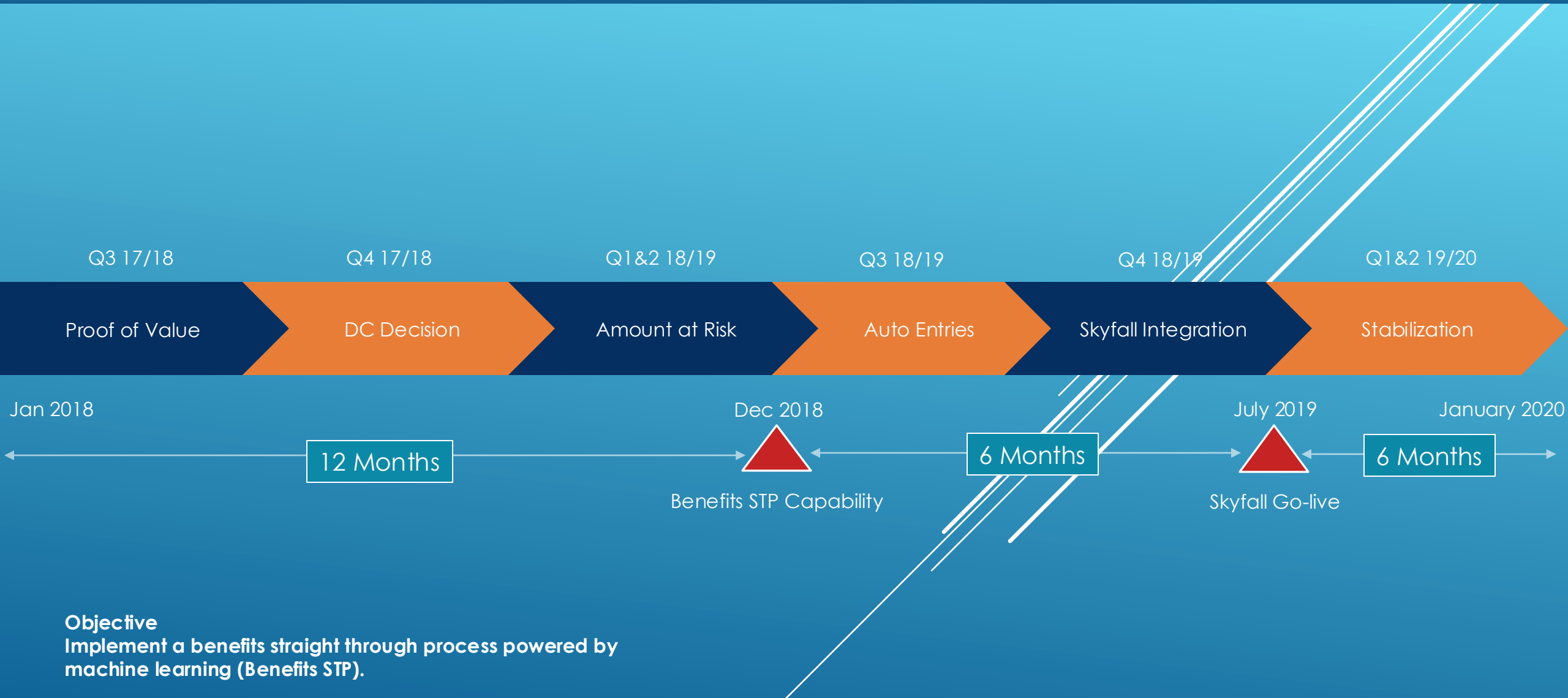| #	Project	Objective	Box
1	Skyfall	Replace JDE with new system that supports parameterized products, software as a service, data as a service, is agency integrated and developer ecosystem ready	3
2	Treadstone	Rebuild mobile and web apps into analytics engines and personal assistants to drive engagement	3
3	Alexa	Implement a benefits straight through process powered by machine learning (Benefits STP)	3
4	Thunderball	Accept various payment methods and agent networks for both in-coming and out-going transactions	2.5
5	Abatis	Foster internal customer self-service powered by the democratization of knowledge and search (package knowledge for easy retrieval and reuse by anyone)	2
6	Spectre	Access any application / resource, anytime, anywhere, on any device	2
7	Etna	Achieve hyper converged infrastructure and hot DR site	2
8	Stratus	Migrate non-core systems and applications to the cloud to reduce TCO	2

SKYFALL

4 Weeks	16 Weeks	12 Weeks	4 Weeks	1 Week	24 Weeks	
Vendor Project Plan & Design	System Development	Data Migration & Unit Testing	User Training & UAT	Production Deployment	Stabilization	END

June 2018   July 2019   January 2020

10 Months   6 Months

Go-Live

Objective
Replace JDE with new system that supports parameterized products, software as a service, data as a service, is agency integrated and developer ecosystem ready.
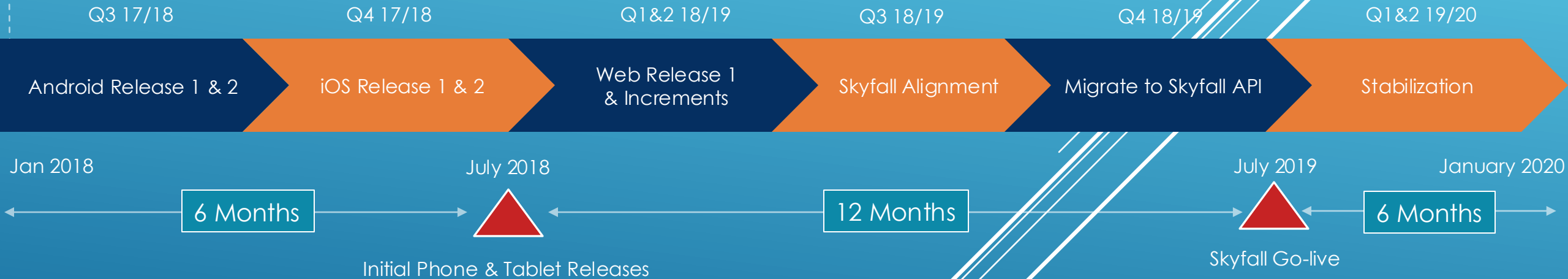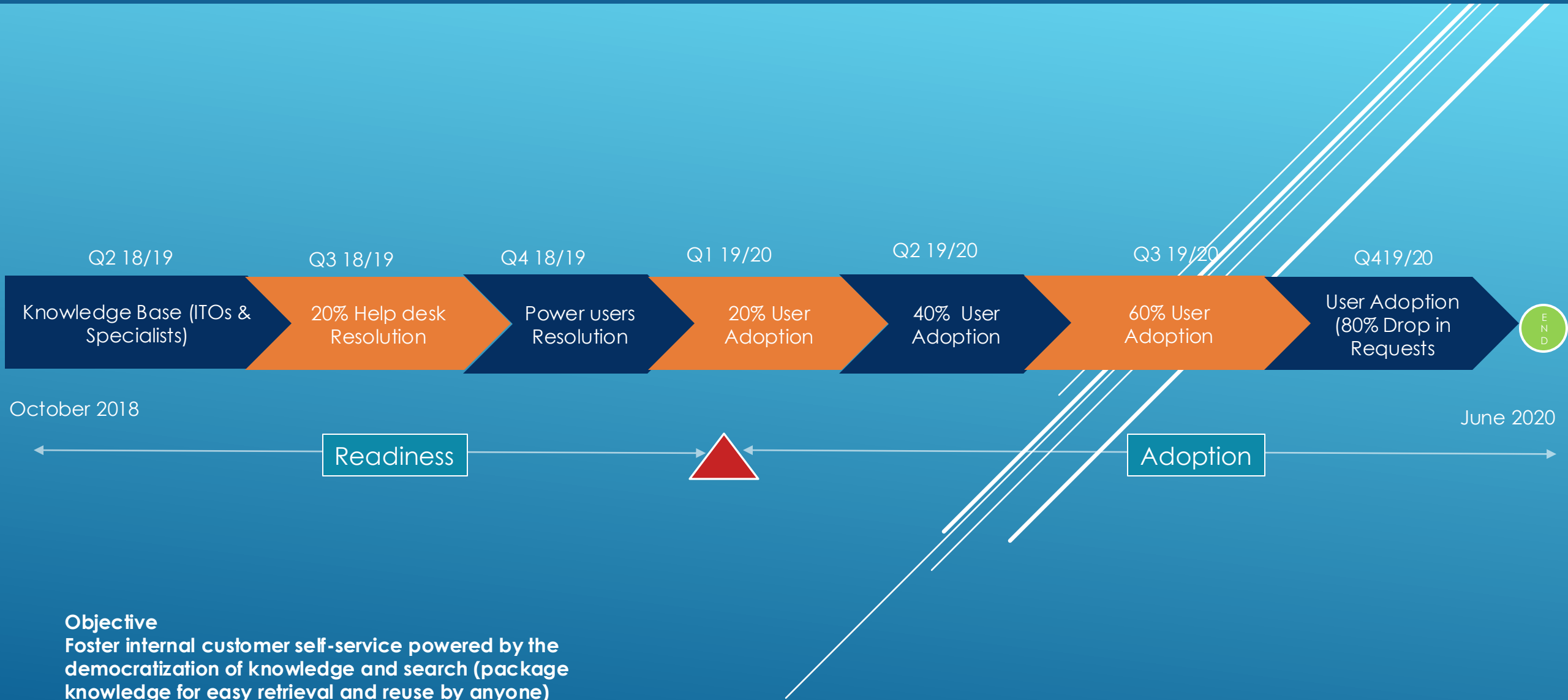
ALEXA

Q3 17/18	Q4 17/18	Q1&2 18/19	Q3 18/19	Q4 18/19	Q1&2 19/20
Proof of Value	DC Decision	Amount at Risk	Auto Entries	Skyfall Integration	Stabilization

Jan 2018

Dec 2018

July 2019

January 2020

12 Months

6 Months

6 Months

Benefits STP Capability

Skyfall Go-live

Objective
Implement a benefits straight through process powered by machine learning (Benefits STP).

TREADSTONE

Transaction Alerts

+ Contribution
+ Interest
+ Statements
+ Benefits Claim Status

Q3 17/18	Q4 17/18	Q1&2 18/19	Q3 18/19	Q4 18/19	Q1&2 19/20
Android Release 1 & 2	iOS Release 1 & 2	Web Release 1 & Increments	Skyfall Alignment	Migrate to Skyfall API	Stabilization

Jan 2018   July 2018   July 2019   January 2020

6 Months   12 Months   6 Months

Initial Phone & Tablet Releases

Skyfall Go-live

Objective
Rebuild mobile and web apps into analytics engines and personal assistants to drive engagement.

ABATIS

Q2 18/19   Q3 18/19   Q4 18/19   Q1 19/20   Q2 19/20   Q3 19/20   Q419/20

Knowledge Base (ITOs & Specialists)	20% Help desk Resolution	Power users Resolution	20% User Adoption	40% User Adoption	60% User Adoption	User Adoption (80% Drop in Requests

END

October 2018

June 2020

Readiness

Adoption

Objective
Foster internal customer self-service powered by the democratization of knowledge and search (package knowledge for easy retrieval and reuse by anyone)

THUNDERBALL

Q2 18/19 — **Direct pay**

Q3 18/19 — **Easy Money**

Q4 18/19 — **Msente-UTL**

Q1 19/20 — **Direct Debit**

Q2 19/20 — **card less international money transfers**

Q3 19/20 — **Bit Coin**

Q4 19/20 — **TBC**

END

Objective
Accept various payment methods and agent networks for both in-coming and out-going transactions

SPECTRE
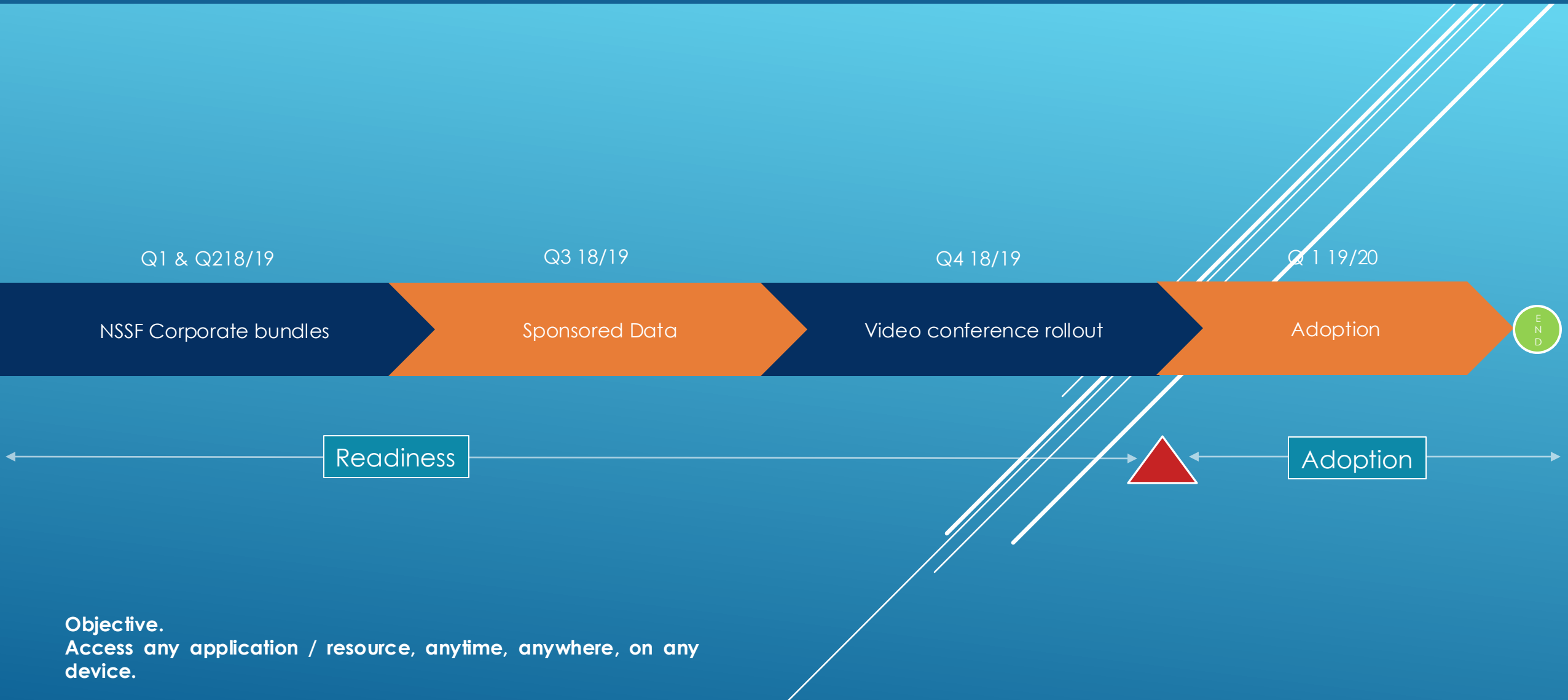
STRATUS

Q1 & Q2 18/19 — Email

Q3 18/19 — Productivity files

Q4 18/19 — Backups & Snapshots

Q 1 19/20 — Dev / Test / STG / PDN Environments

END

Objective.
Migrate non-core systems and applications to the cloud to reduce TCO.

IDEAL TECHNOLOGY SCORECARD

#	Perspective	Measure	Components	Weight	Target
1	Customer	Self-Service Index	Channels Parity, Adoption, Walk-ins Reduction	20%	Growth
2	Finance	Ubiquity Index (Affects Cost of Service)	Service Parity, Adoption, Cost Reduction	20%	Growth
3	Business Process	STP Index	Process Coverage, Case Coverage	20%	Growth
4	People & Systems	Innovation Index	Engagement, Progress, Impact	20%	Growth
			Total	80%	

TOP THREATS

#	Threat	Description
1	Box 1 Obsession	We are extremely an incremental improvement based culture, not a non-linear or breakthrough innovation culture. Individuals have automation targets in their score cards Too many optimization needs forcing IT to deploy resource, time, and effort in Box 1 activities. We currently have over 40 active initiatives in Box 1.
2	Volatility Effect	Decisions on deployment of resource being made based on volatility not long-term objectives.
3	Resistance to Internal Customer Relationships Changes	Traditionally, technology has been focused on people that served customers. Now technology serves customers directly. As technology shifts from a support role to a customer facing role, the internal relationships have to change. These changes threaten the status-quo and are not welcome.
4	Perception of the "Future"	The future is not what we shall do in 2025. The future is the current mix of all initiatives across the 3 boxes today. The future is now.

Box 1 — Optimize the Present

Box 2 — Selectively Forget the Past

Box 3 — Create the Future
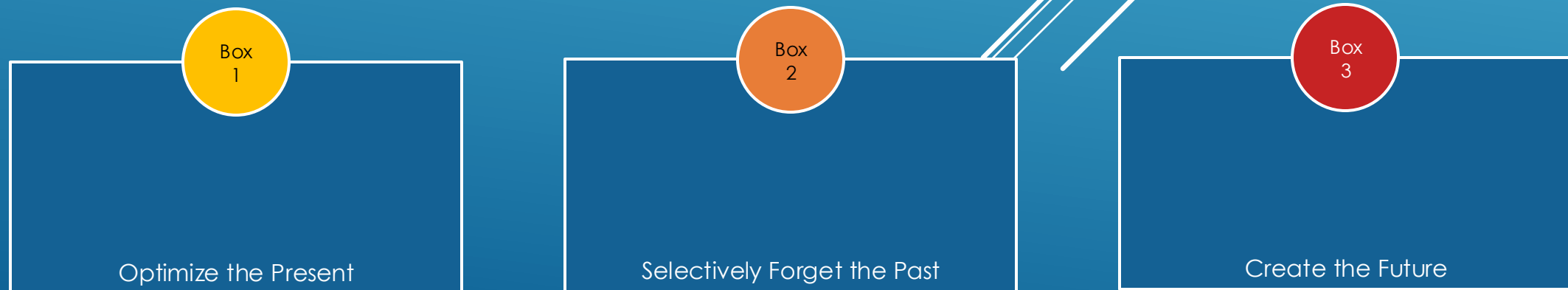
APPENDIX

TECHNOLOGY INNOVATION PROCESS

The Innovation Process
NSSF should embed a 3-stage, sprint-based, innovation process. At the beginning of the innovation process, ideas come out of strategic objectives, emerging trends, current points of pain, and industry best practice.

In Stage 1 of the process, ideas are placed in one of 3 boxes, and are then evaluated through a quick back-of-the envelope modeling exercise to assess impact, internal / external skill sources, potential budget sources, hypothesis testing timeline. Every 1st Wednesday of the month, IT holds a pitch day where vendors and internal staff give more information about their ideas.

In Stage 2 of the process, we build a business case, set success criteria, assemble a team, process budget approval, and kick off a sprint-based pilot.

If incubation is successful, the solution is then promoted into business as usual mode. A full risk analysis is undertaken, user training is done, process integration is completed, and BAU benefits realization kicks off.

The Innovation Index
We measure innovation through an index with 2 components;

- Engagement – The percentage of IT Staff that were actively involved in one of the 3 stages of innovation. This currently accounts for 80% of the index score. As innovation culture takes root, participation will downgraded to 20%.

- Impact – The extent to which the target business objectives have been achieved. This currently accounts for 80% of the index score. As innovation culture takes root, participation will downgraded to 80%.

Prioritization Guidelines
- Internal Customer Needs: Business First
- Business Needs: Collections First
- External Customer Needs: Employers First
- Employer Apps: Desktop Web First
- Member Apps: Android First

STRATEGY CANVAS

Manage the Present	Forget the Past	Create the Future
External Self Service & Straight Through Processing • Enrollment • Payments – Contributions, Benefits • Account Info – Profile, Transaction History **Internal Self Service** • Access Management • Analytics • Devices **Channels** • Mobile Web • Desktop Web • Native Mobile – Android, iOS • Feature Phones – IVR, SMS, USSD • Other Touch points – ATMs, Kiosks	**Integration** 3 core systems whose integration is not seamless. This affects workflow and turn around time. **Data Integrity** Our environment has multiple datasets that are not synchronized. This leads to duplication, errors, and poor customer experience. **Customization** The current core systems require expensive customization, in terms of time, cost, and effort, to meet changing business needs. **Support** Core systems have inadequate vendor support, and limited talent pool, leading to extended incidents and problems, affecting productivity and turn around time. **Industry Misfit / Ongoing Innovation** JDE is not built for social security and therefore the vendor does not deliver ongoing innovation for that space. **Recurring Audit Issues** The current core systems have multiple open audit issues that are unlikely to be resolved. This exposes the business to various risks.	**Ubiquity – Improve capabilities of serving the customer from where he is, not where I am** • Workforce Mobility • Location & Mapping **Ecosystem – Offload more to others of what we have traditionally done ourselves** • Agent Network • Developer Ecosystem • Cloud – SAAS, PAAS, IAAS **Data Science** • Machine Learning • Analytics **Create New Revenue Streams** • Salary / Employment Data Analytics • Software as a Service (SAAS) • Affiliate Programs • Fund Administration Services **People & Talent**

INNOVATION PIPELINE

#	Project	Objective	Box	Current State
1	Skyfall	Replace JDE with new system that supports parameterized products, software as a service, data as a service, is agency integrated and developer ecosystem ready	3	Proposals were successfully submitted by both shortlisted bidders. Desk evaluation completed. Demos scheduled to start March 15.
2	Treadstone	Rebuild mobile and web apps into analytics engines and personal assistants to drive engagement	3	Android Mobile app has been tested and is ready for release. Public release is scheduled for Monday Mar 12.
3	Alexa	Implement a benefits straight through process powered by machine learning (Benefits STP)	3	Kick-off meeting with Microsoft takes place on Tuesday Mar 13.
4	Thunderball	Accept various payment methods and agent networks for both in-coming and out-going transactions	2.5	Card payments approval is being processed by marketing.
5	Abatis	Foster internal customer self-service powered by the democratization of knowledge and search (package knowledge for easy retrieval and reuse by anyone)	2	Service Now is now live and is being used by IT resolvers. Next user set will be Power Users, after which a fund-wide rollout will be done.
6	Spectre	Access any application / resource, anytime, anywhere, on any device	2	Currently negotiating an NSSF bundle with both Airtel and MTN to reduce the cost of remote access.
7	Etna	Achieve hyper converged infrastructure and hot DR site	2	Site visits were completed last month. Negotiations with manufacturers were undertaken. Initiating procurement procedure this week.
8	Stratus	Migrate non-core systems and applications to the cloud to reduce TCO	2	NA
9	Aquila	Replace Aquila with new registration system from CPF	1	Vendor is currently onsite. UAT is planned for Friday 16th Mar. Go live will be achieved by end of month.