STOCK EXCHANGE NEWS SERVICE (SENS)

16 November 2021

AGENDA

- Project Background and Introduction

- High Level Business and Technical Impacts

- Key Dates

- Questions

PROJECT BACKGROUND AND INTRODUCTION

BACKGROUND

- The current SENS system was implemented in 2012

- The system was later enhanced to accommodate additional announcement types for instruments listed on the Equity and Interest Rate markets

- In 2018, we implemented the full & abridged financials

- In 2019, the workflow software was upgraded to the latest version. However, the new workflow version has enhanced features and capabilities that we are yet to make use of

- In August 2020, when the new Debt Listing Requirements came into effect, we introduced certain new announcement types and sub-types into the system

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CORE SERVICE FUNCTIONS AND OUTPUTS

- Core functions of SENS:
  - Issuers need to disseminate accurate company announcements and price sensitive information to the market on a real-time basis
  - Ensure announcements are received at the same time by all subscribers
  - Ensure that Listing obligations and regulations are met

- Key uses of SENS outputs:
  - Availability of accurate, timely and efficient receipt of company announcements in a usable format
  - The primary source of accurate company news announcements for Traders, Asset Managers and or other Investors looking to invest capital in listed companies
  - Enhance the product offering of data distributors to their clients to meet ever changing needs

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STRATEGIC ALIGNMENT AND KEY DRIVERS FOR CHANGE

- Continuous alignment, where feasible, to international best practice and standards

- Enhance capability and operational efficiency of the services we provide to clients

- Enhance how Listed Companies or their Sponsors submit information to SENS

- Adapt to evolving SENS data distributor and consumer needs

- Where possible, facilitate straight through processing of information for both the JSE and clients to eliminate the need for manual capture and potential errors

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HIGH LEVEL IMPACTS & STAKEHOLDERS

CURRENT SENS MARKET DATA PRODUCTS

Live SENS	Non-Live SENS

SENS stories are disseminated intraday to all licensed Live SENS Information Subscribers as soon as they are released for publication

Live SENS data provided via the Regulatory News Gateway in a FIX/Fast message with embedded NEWSML containing the text announcement. Access to abridged and full financials provided
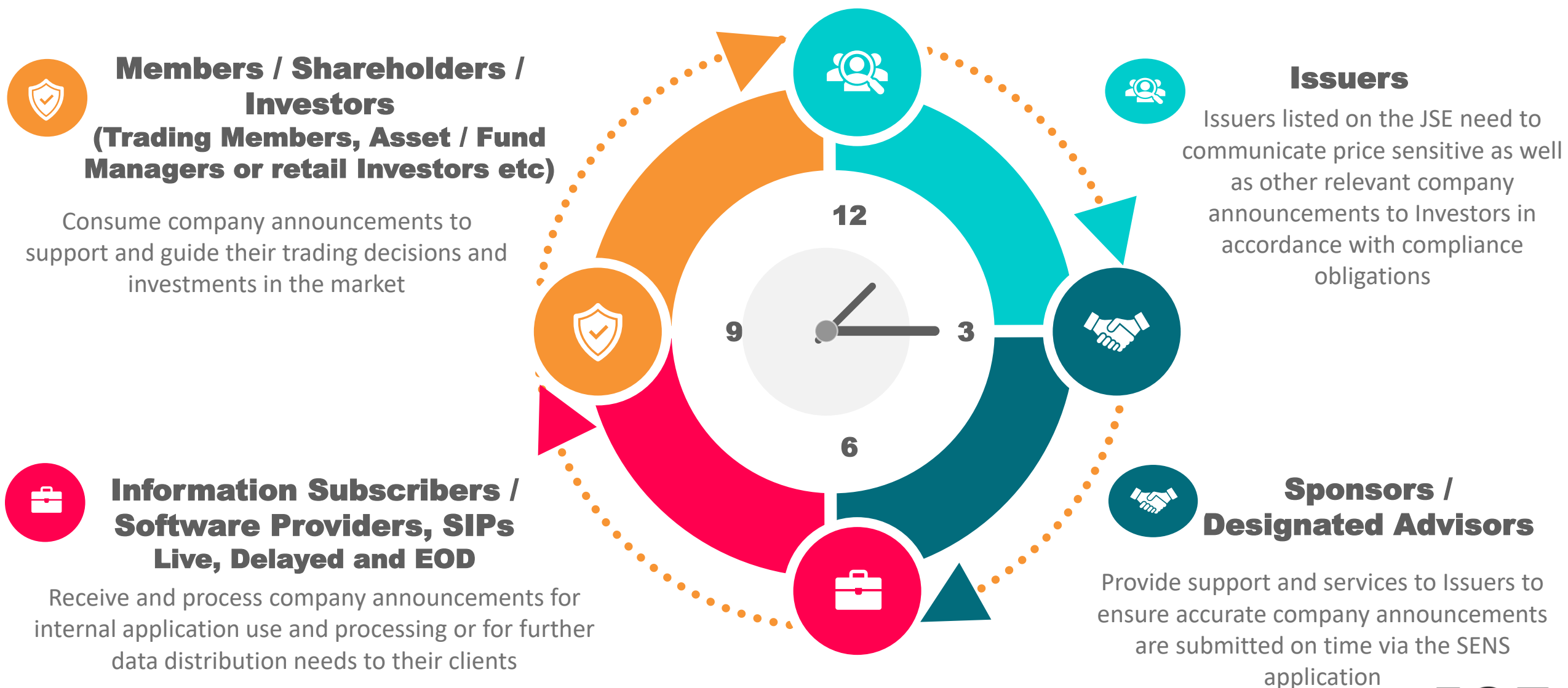
All SENS stories published during the day are made available at the end of day in two formats to licensed non-live SENS Information Subscribers via two End of Day SENS market data files via JSE IDP FTP server

End of day SENS data is provided in both Text and PDF formats (text embedded in NewsML) with links to full Financial Results where applicable

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SENS DAILY LIFE CYCLE & KEY STAKEHOLDERS

Members / Shareholders / Investors
(Trading Members, Asset / Fund Managers or retail Investors etc)

Consume company announcements to support and guide their trading decisions and investments in the market

Issuers

Issuers listed on the JSE need to communicate price sensitive as well as other relevant company announcements to Investors in accordance with compliance obligations

Information Subscribers / Software Providers, SIPs Live, Delayed and EOD

Receive and process company announcements for internal application use and processing or for further data distribution needs to their clients

Sponsors / Designated Advisors

Provide support and services to Issuers to ensure accurate company announcements are submitted on time via the SENS application

12

9   3

6

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SENS STAKEHOLDER GROUPS IMPACTED

Issuers Sponsors Designated Advisors

Streamline the process for SENS submission for Issuers / Sponsors / DAs and address known system constraints

Information Subscribers Live, Delayed and EOD

Enriched service to enable their products and services. Includes Data Distributors, Members, Asset Managers, Investors etc.

Software Providers, Own solutions & *SIPs

How files are received real-time and EOD, whilst providing enriched content to enable their software capability
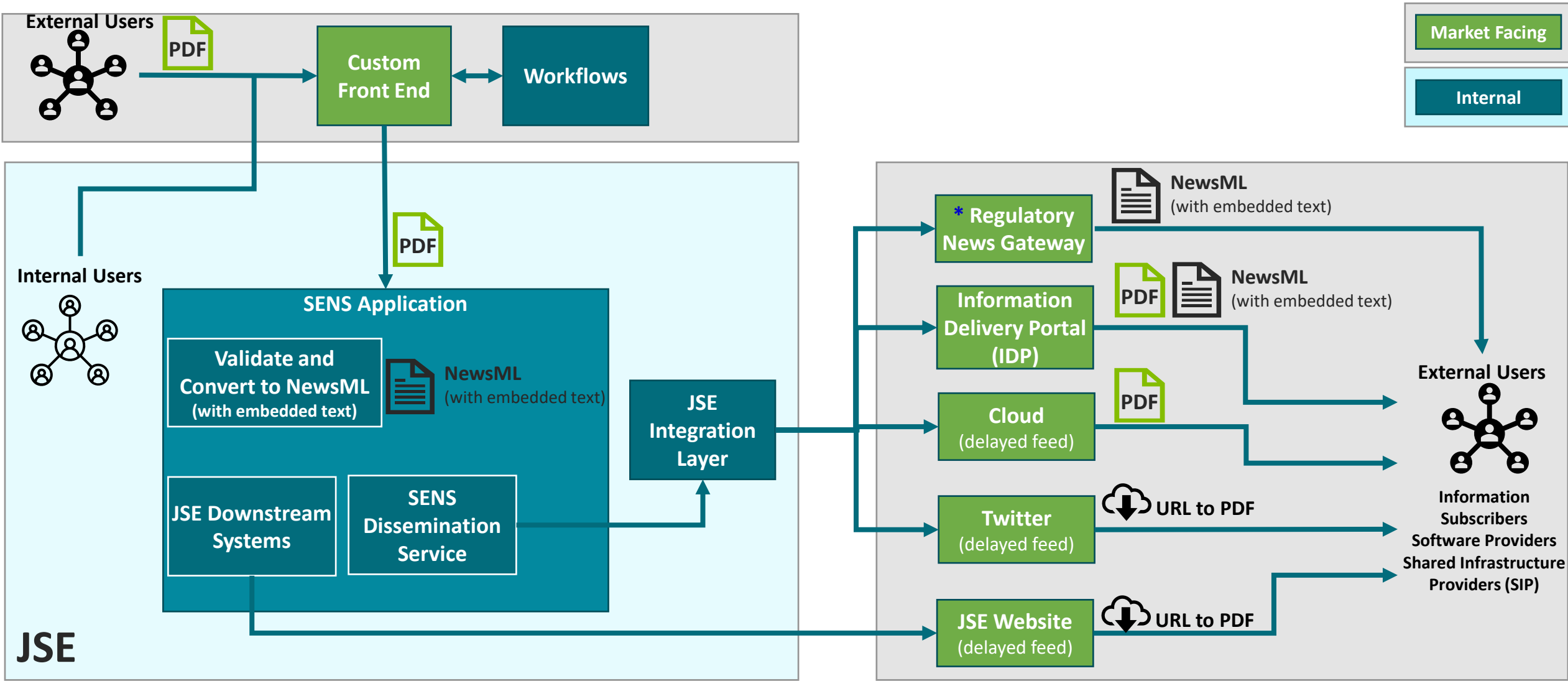
JSE, Strate & other Intermediaries

Enriched service and feed to streamline for e.g. corporate actions and enable their services to their clients and shareholders
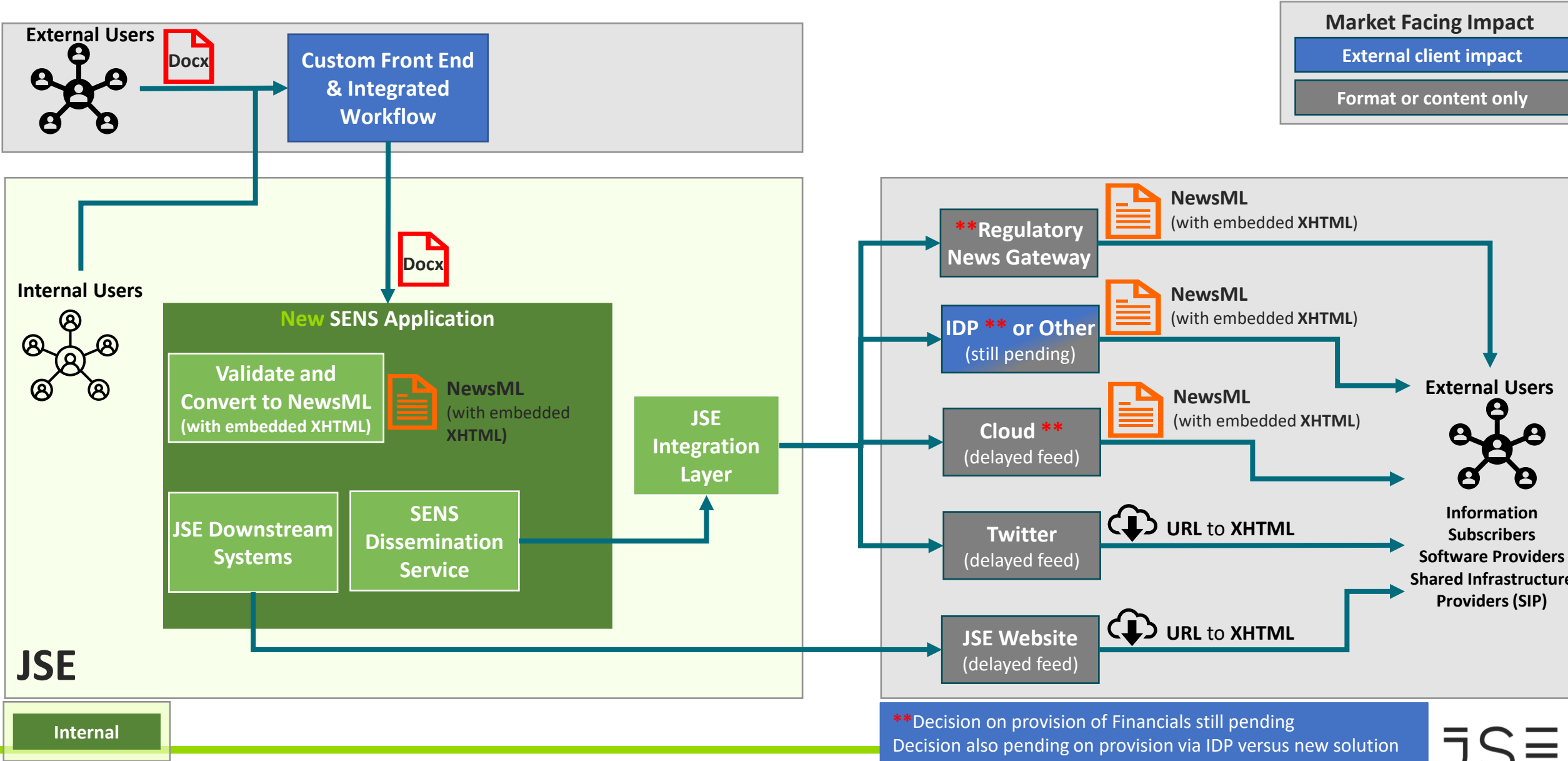
NSX & it's members and clients

NSX shares technology with the JSE. The exchange and their clients will benefit in the same way as those of the JSE for the NENS service

*Shared Infrastructure provider (SIP)

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STOCK EXCHANGE NEWS SERVICE (SENS) – CONCEPTUAL AS IS

STOCK EXCHANGE NEWS SERVICE (SENS) – CONCEPTUAL TO BE

External Users

Docx → **Custom Front End & Integrated Workflow**

Market Facing Impact
- External client impact
- Format or content only

Internal Users

Docx

New SENS Application

Validate and Convert to NewsML (with embedded XHTML)

NewsML (with embedded XHTML)

JSE Downstream Systems

SENS Dissemination Service

JSE Integration Layer

**Regulatory News Gateway — NewsML (with embedded XHTML)

IDP ** or Other (still pending) — NewsML (with embedded XHTML)

Cloud ** (delayed feed) — NewsML (with embedded XHTML)

Twitter (delayed feed) — URL to XHTML

JSE Website (delayed feed) — URL to XHTML

External Users

Information Subscribers Software Providers Shared Infrastructure Providers (SIP)

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Internal

**Decision on provision of Financials still pending
Decision also pending on provision via IDP versus new solution

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SENS HIGH LEVEL IMPACT FOR ISSUERS, SPONSORS AND DESIGNATED ADVISORS

Issuers Sponsors Designated Advisors

Streamline the process for SENS submission for Issuers / Sponsors / DAs and address known system constraints

- **New User Interface** including integrated workflows (more efficient)

- **New upload format** - move away from 2 x input documents (TEXT and PDF) to a Microsoft WORD .docx format, a more enriched easier format for processing and display

- **Decision on** provision of **financials still pending** (formats and whether full & abridged)

- **SENS will convert the docx** format into **XHTML** prior to disseminating announcement

- **Removal of Tokens** with a more streamlined approach for Issuers to manage who is authorised to submit announcements on their behalf

- **Improved user profiles**, additional **access** roles (e.g. new view only role) and system login **authentication**

- **Enhanced features** to leverage workflow for automation, alerts and notification to designated contacts when announcement successfully disseminated

- **Separation** of the SENS / Webstir systems – separate logins

- **Input of relevant structured data** fields for certain announcement types / sub types

- **Review /audit** of announcement types, sub-types and release types as needed

- **New dissemination format** in a more user-friendly format XHTML

- **Alignment to minimum standards** for announcements e.g. File size and numerical formats to ensure consistency for the best end user experience

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SENS HIGH LEVEL IMPACT FOR ISSUERS, SPONSORS AND DESIGNATED ADVISORS

Issuers
Sponsors
Designated
Advisors

Streamline the process for SENS submission for Issuers / Sponsors / DAs and address known system constraints

Benefits of an input document in Docx Format

- Any file with the Docx extension is an **open XML format document**

- These files are used for reports, resumes, letters, documentation, note-taking, newsletters, presentations and more – **caters for type setting, font colours and formats** e.g. bold, underline, italics and the like

- **Docx supports images** embedded within it – in the converted disseminated XHTML message, links are embedded to facilitate the download the images (e.g. like a webpage)

- Most standard word processors available can be used to generate required input documents i.e. **no need for specialized custom software**

- Using the **OpenXML standard will facilitate the automated generation of required input** documents – no need for special software

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SENS HIGH LEVEL IMPACT FOR INFORMATION SUBSCRIBERS

Information Subscribers Live, Delayed and EOD

Enriched service to enable their products and services. Includes Data Distributors, Members, Asset Managers, Investors etc

Benefits of a XHTML output document

- XHTML is an **open standard** and therefore is **easier to automate** the receipt, consumption and processing of the announcement via an application

- XHTML offers a **better user experience** as it caters for type setting, font colours and formats e.g. bold, underline, italics and the like – format as submitted by the Issuer, can be viewed by the receiver

- XHTML **supports the ability to embed images** i.e. If an announcement includes a company logo, this will be visible to the end users receiving the XHTML content

- **No specialized viewing software** required to view the content of the announcement - a standard web browser can be used to view the file

- In simple terms – a pretty picture that is machine readable

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SENS HIGH LEVEL IMPACT FOR INFORMATION SUBSCRIBERS – LIVE

Information Subscribers Live, Delayed and EOD

Enriched service to enable their products and services. Includes Data Distributors, Members, Asset Managers, Investors etc

Live

- **No change to** the existing **FIX/FAST News message layout** disseminated via the real-time Regulatory News Gateway

- **No change** to the **enablement COMPIDs** to access the News Gateway

- **New XHTML dissemination format** for all announcements

- **Enriched format and content** of information passed in the **EncodedText** field (NewsML with embedded XHTML)

- **Updated Services Documentation** including specifications, NewsML Catalog, Knowledge Item and Schema files to be provided by the JSE for applications

- Introduction of **additional tagged structured data fields** within the NewsML section of the message

- **Alignment to minimum standards** for information display e.g. numerical formats, space versus comma for ,000s etc.

- **Decision on** provision of **financials still pending** (formats and whether full & abridged)

SENS HIGH LEVEL IMPACT FOR INFORMATION SUBSCRIBERS – EOD

Information Subscribers Live, Delayed and EOD

Enriched service to enable their products and services. Includes Data Distributors, Members, Asset Managers, Investors etc

End-Of-Day (EOD)

- **Potentially a new delivery service** for the download of EOD products
  - Migration of SENS EOD products from the Information Delivery Portal (IDP) FTP Server to new delivery platform

- **New dissemination format** for all announcements
  - Same message layout for EOD as disseminated real-time intra-day

- **Enriched format and content** of information passed in the **EncodedText** field (NewsML with embedded XHTML)

- **Updated Services Documentation**, including specifications as well as NewsML Catalog, Knowledge Item and Schema files to be provided by the JSE for applications

- Opportunity to introduce **additional structured data fields** within the NewsML section of the message (as tagged fields)

- **Alignment to minimum standards** for information display e.g. numerical formats space versus comma for ,000s etc.

- **Decision on** provision of **financials still pending** (formats and whether full & abridged)

SENS HIGH LEVEL IMPACT FOR INFORMATION SUBSCRIBERS – DELAYED

Information Subscribers Live, Delayed and EOD

Enriched service to enable their products and services. Includes Data Distributors, Members, Asset Managers, Investors etc

Twitter (delayed feed)

- **No change** to how SENS tweets are received / viewed

- **No change** to time of delayed feed

- **New dissemination format** for all announcements
  - Condensed flash headline with still include the condensed Bitly URL link
  - Bitly URL will open the announcement in a browser view window
  - Enriched announcement content visible via web browser

JSE Website (delayed feed)

- **No change** to how the delayed feed via the JSE website can be accessed / viewed

- **No change** to time of delayed feed

- **New dissemination format** for all announcements
  - Flash headline when clicked will open the enriched announcement content visible via a web browser window

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SENS HIGH LEVEL IMPACT FOR INFORMATION SUBSCRIBERS – DELAYED

Information Subscribers Live, Delayed and EOD

Enriched service to enable their products and services. Includes Data Distributors, Members, Asset Managers, Investors etc

Cloud (delayed feed)

- **No change** to how SENS announcements will be accessed in the Cloud

- **No change** to time of delayed feed to the cloud

- **New dissemination format** for all announcements
  - Enriched announcement content visible via web browser

SENS HIGH LEVEL IMPACT FOR SOFTWARE PROVIDERS

Software Providers, Own solutions & SIPs

How files are received real-time and EOD whilst providing enriched content to enable their software capability

Live & EOD

- **Same as for Information Subscribers**

- Cater for enriched format and content of information passed in the EncodedText field
  - NewsML with embedded XHTML and tagged structured data fields (where relevant)

- Leverage off straight through processing of electronic structured data into downstream systems / products
  - Ensure they can accommodate and process the optional additional structured data fields within the NewsML section of the message

*Shared Infrastructure provider (SIP)

SENS HIGH LEVEL IMPACT FOR JSE AND OTHER INTERMEDIARIES

JSE, Strate & other Intermediaries

Enriched service and feed to streamline for e.g. corporate actions and enable their services to their clients & shareholders

Live & EOD

- **Same as for Information Subscribers**

- Cater for enriched format and content of information passed in the EncodedText field

  - NewsML with embedded XHTML and tagged structured data fields (where relevant)

- Provide an enriched more efficient service to shareholders

- Leverage off straight through processing of electronic structured data into downstream systems / products

  - Ensure they can accommodate and process the optional additional structured data fields within the NewsML section of the message

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SENS HIGH LEVEL IMPACT FOR NSX THEIR ISSUERS, MEMBERS AND CLIENTS

NSX & it's members and clients

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Live & EOD

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- Cater for enriched format and content of information passed in the EncodedText field
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- Provide an enriched more efficient service to shareholders

- Leverage off straight through processing of electronic structured data into downstream systems / products
    - Ensure they can accommodate and process the optional additional structured data fields within the NewsML section of the message

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STRUCTURED DATA OPPORTUNITIES (ASPIRATIONS)

Benefits of providing key information in electronic format via structured data fields:

- **More automation** without manual intervention

- Corporate Action information/events being provided electronically will **enable all information subscribers**, (including Strate, CSDPs, Members, Fund Managers & the JSE) **to better ingest** the relevant information via automated programs

- Structured data will **expedite the delivery and flow** of this critical corporate action information to the shareholders/investors, required to make informed trading and election decisions

- In addition, automated processing of the data will **reduce the risk of data capture errors** and incorrect information being made available to shareholders/investors

- Introducing **rules-based validation** per corporate action event type, will ensure that event information and dates conform to the Form H timetable requirements, i.e. all required data is included for processing upfront (no need for to and fro between the sponsor and JSE consultant team
  - E.g. Director dealings – to include specific fields for Director Name, Buy or Sell, Volume and Share Price
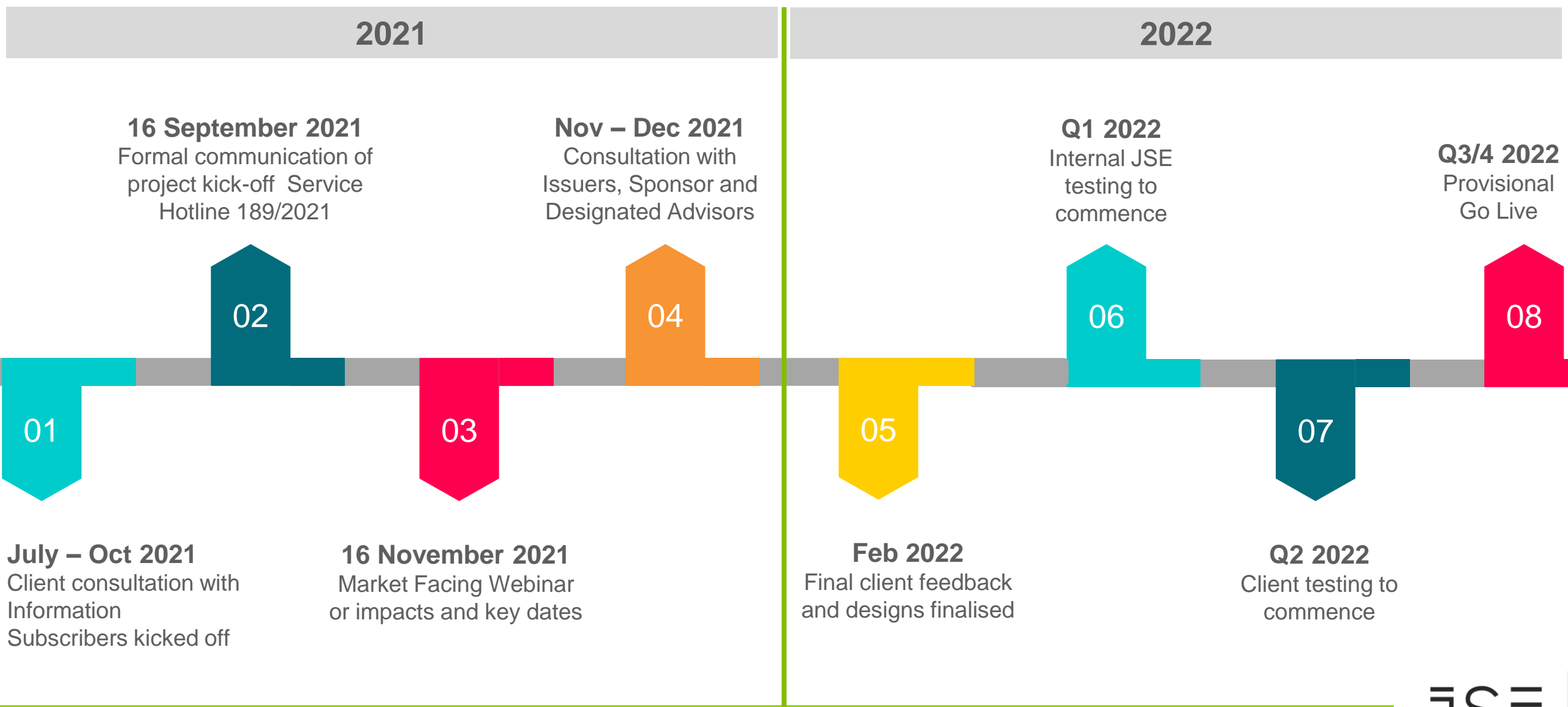 - E.g. Cash dividend - to include all salient dates, dividend rate and reporting period

PROJECT APPROACH, KEY DATES AND NEXT STEPS

DELIVERY APPROACH FOR COLLABORATION

- Continuous and iterative development, testing and signoff - However a big bang implementation will be necessary to switch off the current production system and enable the new system

- Customer engagement drives Agile success – we need active client engagement and participation in areas such as:

  - Planning sessions

  - Interactive participation in workshops and collaboration sessions

  - Assist in evaluating the solution incrementally at various stages

- Focus is on continuous exploration and improvement of the products and services

- Consultation with various stakeholder groups has commenced and will continue throughout the project

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SENS HIGH LEVEL KEY DATES

2021

2022

16 September 2021
Formal communication of
project kick-off Service
Hotline 189/2021

Nov – Dec 2021
Consultation with
Issuers, Sponsor and
Designated Advisors

Q1 2022
Internal JSE
testing to
commence

Q3/4 2022
Provisional
Go Live

02

04

06

08

01

03

05

07

July – Oct 2021
Client consultation with
Information
Subscribers kicked off

16 November 2021
Market Facing Webinar
or impacts and key dates

Feb 2022
Final client feedback
and designs finalised

Q2 2022
Client testing to
commence

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SENS PROJECT NEXT STEPS

Feedback received will be taken into consideration in our planning session(s):

- Current pain points or blockers will be considered – we will follow a staged or phased implementation of changes where necessary i.e. Minimum Viable Product (needs) versus wants (nice to have)

Collaboration and communication:

- Identify a focused group to assist in planning, testing and signoff
- Identify a representative set to participate in working group sessions where needed
- All clients will be welcome to join the regular general communication feedback sessions and status update sessions
- Mandatory participation and user readiness tasks and activities will be required at different stages of the project and will be communicated in advance
- Formal notice in accordance with the JSE Services Agreement (JSA) and JSE Data Agreement (JDA) will be provided

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SENS KEY CONTACTS

Primary Contact per Stakeholder

- This individual will be the primary contact of the Stakeholder

- Receive all communications related to this initiative (both formal and informal)

- Assist in coordinating and sourcing feedback and/or comments and ensure active participation in solution demos, workshops, planning sessions etc. (where necessary)

- Separate business and technical contacts will be ideal

Working Group Representatives (optional)

- We would like to have a small focused representative set of the various stakeholders to work more closely with our team in detailed discussions and design sessions

- Meet as and when needed to assist us in refining changes and requirements

- Please send both primary and working group contact details of nominated individuals to:
  SENSProject@jse.co.za

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Contact us:

Please send all queries to
SENSProject@jse.co.za or reach out to
your relevant relationship / account
manager

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QUESTIONS ?