



# FLOE

**SOLUTION IN DETAIL**

### Introduction

Business communication has changed over the past twenty years. The rise of electronic commerce has led to the reduction in printed and posted output, the death of fax, and to the increase in the use of email to carry transactional content such as order confirmations, delivery notifications and invoices.

Some of the B2B communication takes place as purely electronic messaging using EDI and interfacing technologies. Some of the B2C communication takes place purely within mobile or desktop apps using notification messages. The rest of the business communication is conducted using email, and the amount of this is enormous and still rising.

### Email is the business document

Email has been used increasingly to replace posted communication: It is in this sense the delivery mechanism; the container within which the 'physical' business document is carried.

To this end, the business document was included as an attachment: typically in PDF format, so that it could be printed by the receiver. Organisational branding focussed on the PDF output, and often the accompanying email was plain.

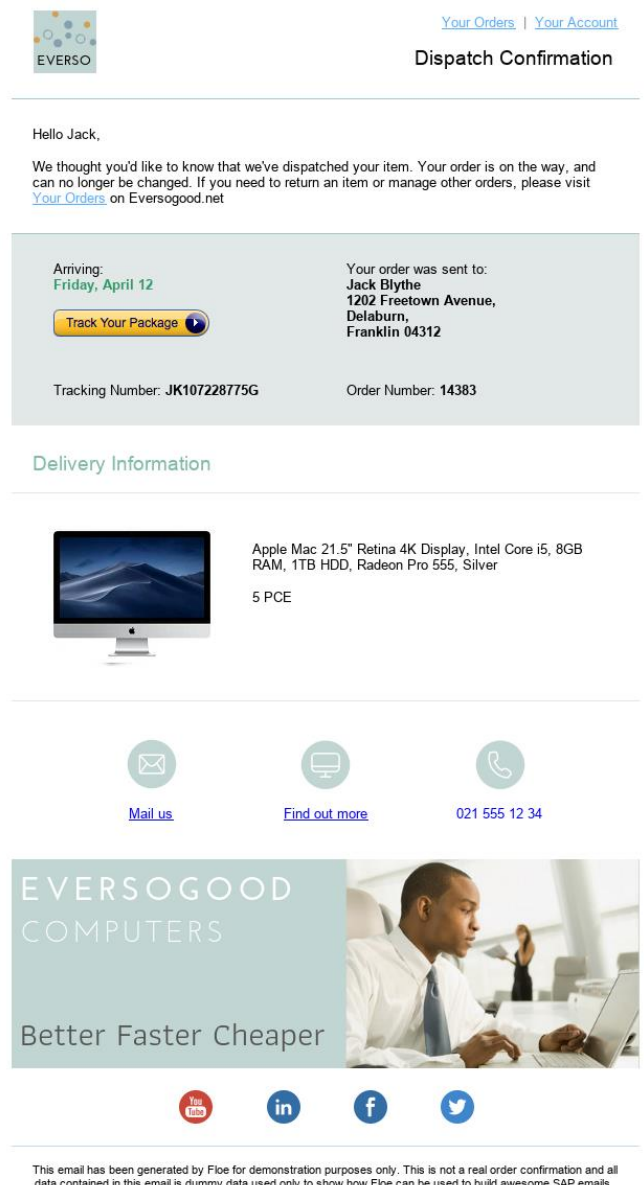
In the mobile world the email is the document of record rather than an attached PDF. Recipients are able to save as PDF or print if they wish, or just save the email to a file server. There is no longer any need to include a separate PDF attachment; indeed PDFs can be an impediment to easy communication.

### Email is the main communication medium

Organisations issue regular communication to various different types of contact, such as prospects, customers, suppliers, employees, managers, business partners, citizens, and shareholders.

In lots of scenarios, these communities are able to help themselves to information or trigger processes via apps, web portals or just through a website. Issued communication can reach employees through a work Inbox, portal or mobile app notifications. Some types of communication to customers and employees can be sent by SMS. But the vast majority of business communication is sent by email.

Given that everybody has an email client on every device, email is the essential tool for business communication. The emails may be output documents, process notifications, mass communication or reports. They are the prime communication media for all key business communities. So email design and content management should be an essential part of an organisation's communication strategy.



### Emails deliver an important experience

The proliferation of connected mobile devices has led to an enormous increase in user expectation for engaging business communication. Business emails have changed beyond recognition and are important because they shape user and customer experience.

In a world of spam and unnecessary notifications, it is critical to maximise the impact of emails. Different email content has different relevance to different recipients, so emails should be tailored for each recipient.

Business email should be a key focus of communication strategy: Not just marketing emails, but also the thousands of emails generated from SAP business processes. Those business emails define much of the experience provided to the various business communities; they can build and damage a brand.

Those communities require an exceptional experience, with rich graphical content and information presented in a way that's easy to understand and act on.

### **The sales, service and marketing opportunity**

The vast majority of marketing emails are simply not opened or read. But business communication like order confirmations, shipment updates and payment receipts are read every time. This makes them enormously powerful mechanisms for reaching customers. Every business email provides an opportunity to:

- **Inform and educate**  
About the organisation, market, products, performance, job opportunities etc.
- **Provide extraordinary service**  
Provide a 'gold standard' that will keep customers coming back.
- **Reinforce your brand**  
Through consistent use of logos, fonts, colours and other styles.
- **Build a fan club**  
Share content and links to help grow followers and subscribers.
- **Offer promotions and incentives**  
Include tailored dynamic content for each recipient.
- **Champion your values**  
Highlight your community impact and share your view of the world.
- **Drive website traffic**  
Share content and turn every communication into a newsletter.

Marketing campaigns to achieve results like this can cost a fortune. By harnessing the communication an organisation already sends, the same results can be achieved for free.

### **The SAP Email Problem**

Organisations running SAP send hundreds of different automated emails from SAP. However:

- i) SAP Emails don't look very good, and
- ii) HTML Emails are difficult to develop in SAP.

The 'standard' SAP approach is to convert print output to PDF and send this as an attachment to an email. However, recipients now expect rich content in the body of email itself rather than in a separately attached file. Moreover, PDF attachments are large and often get caught in corporate firewalls, never to arrive.

When SAP issues an email without an attachment, (for example, for document output or workflow process notification) the resulting emails have little or no process data within the email body.

The SAP output solutions focus on the PDF output document. Changes to both the document and the email content have to be managed by IT and can be complex and slow to deliver. So typically the email content does not change very often and cannot include personalised content, marketing information, latest news, promotions and links.

Today the branding focus must now be on the email content rather than a separate output document: the email becomes the SAP output in its entirety.



### Introducing Floe

Floe is the email generator for SAP through which you can manage email templates and dynamic business rules in order to produce tailored, branded email output. Floe can be used for any SAP email communication and can be incorporated into existing business processes easily.

Floe can be used for any SAP email output such as document output and process notifications.

Floe provides you the opportunity to dramatically improve your SAP communication with business partners.

### Developer tool for building dynamic output

Floe is an Add-on product to SAP, enabling developers to manage email templates, content and business rules. With Floe, complex email output can be built quickly using traditional SAP skills of table configuration, simple ABAP and no additional training.

### Business user tool for managing email content

Floe enables business users to own their own content. Email templates are made up of content blocks that can be treated as master data, and maintained by business users through an intuitive Fiori app. All the email templates are managed securely within the SAP system.

### Email management

Floe provides a framework for the definition of business logic and dynamic templates, for easy ongoing maintenance.

With Floe you can define email types, design email templates and add business logic for data determination, manipulation, attachments, images, and recipients: All the components required to build an email.

Floe also includes the capability to store recipient lists for the purpose of mass communication.

### Email generation

Floe generates HTML emails based on data and business logic from your SAP system.

Floe can dynamically select and manipulate the email template, based on the data from SAP.

Floe can be used for very simple emails or really complex ones, in which, for example, content is dynamically tailored for the particular recipient, or there are multiple levels of nested content.

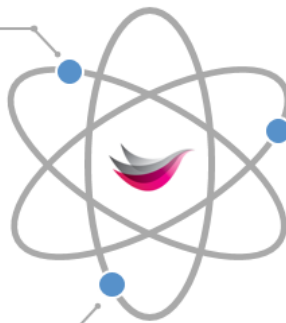


### Email Framework

- ✓ HTML template management
- ✓ Dynamic logic for data selection and manipulation
- ✓ Supports mass communication

### Powerful Integration

- ✓ Simple API to support any scenario
- ✓ Integrated with SAP authorisations
- ✓ Integrated with SAP Connect



### Email Generation

- ✓ Constructs email body based on SAP data and HTML template
- ✓ Supports nested content
- ✓ Supports embedded or linked images

## Powerful integration

Floe provides deep SAP integration at every stage. Any data from SAP systems can be incorporated into the body of the email, and also recipients, images and attachments can be determined from business logic handled inside the SAP system.

Floe is integrated to SAP authorisations, so you can control who can do what. All the outbound messages flow out of the normal SAP Connect interface, so your Basis team can manage them using the standard tools.

In addition, you can trigger Floe from non-SAP systems too, passing in whatever data you like.


## Dynamic and Tailored Content

Dynamic email generation is a key benefit of Floe. Emails can be built dynamically from multiple content blocks, such that the final email content can be driven partially or entirely by business logic.

Emails can include repeating sections or rows to include table-based information, and even repeating nested sections in order to support document output such as sales order item schedule lines.

Both the data and the content can be derived based on business rules. Using Floe, business logic can be added to dynamically change the email content based on SAP data.

In this way, the same email may look very different, containing different paragraphs, links, images or attachments when sent to different recipients. This enables complex output like sales orders and contracts to be generated automatically.


**Account Statement**




Please find details of your current account balance and activity.

If you have any questions contact us on 021 555 1234 or at [sales@eversogood.net](mailto:sales@eversogood.net).


**Statement Date:** 28 February 2019    **Customer Number:** 123456





Account Statement from 1 February 2019 to 28 February 2019

Document	Date	Type	Amount	Clearing
<b>Balance at 01/02/2019</b>			<b>\$ 10,500.00</b>	
1806450097	12/02/2019	DR	\$30,165.00	105623548
105623548	13/02/2019	CR	\$30,165.00	1806450097
1806456121	20/02/2019	DR	\$56,254.00	
<b>Balance at 28/02/2019</b>			<b>\$ 66,754.00</b>	

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 [Find out more](#)
 021 555 1234

EVERSOGOOD COMPUTERS



This email has been generated by Floe for demonstration purposes only. This is not a real order confirmation and all data contained in this email is dummy data used only to show how Floe can be used to build awesome SAP emails.

### Compelling document output

Professional and elegant document output can be achieved easily for any SAP business document.

Floe removes the need for PDF attachments so email sizes are much smaller. This results in higher performance from the sending email server; smaller storage databases; and faster email processing: A much better experience for the customer or recipient.

Document output such as order acknowledgement, delivery notifications, invoices, purchase orders, account statements or payslips can be built in Floe, enabling you to provide improved, engaging communication with customers, suppliers and employees alike.

### Powerful mass correspondence

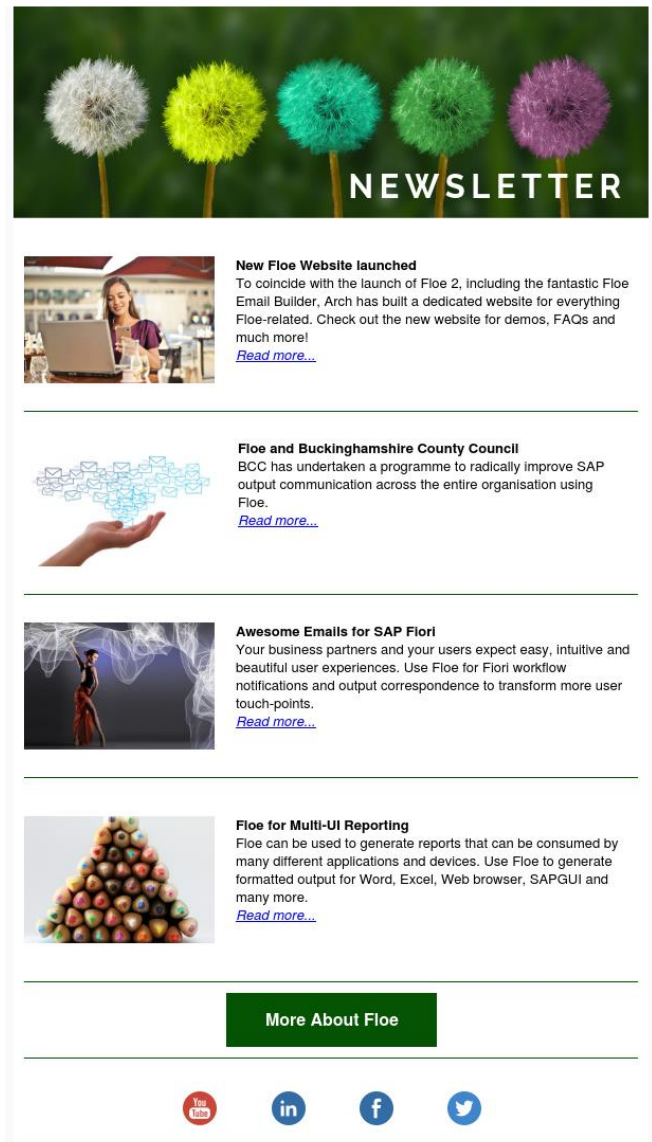
Organisations are increasingly using mass correspondence tools to communicate with different recipient communities. Products like Mailchimp have replaced traditional mail-merge activity, enabling organisations to create mass correspondence using HTML emails to uploaded recipient lists.

However, there are constraints with such web-based solutions:

- The email templates in such tools are static, so that they cannot be tailored for individual recipients beyond simple personalisation using names from the stored recipient list.
- The recipient list is also static: manual activity is required in order to add recipients to particular lists.
- No data integration with information from business systems is possible.
- The emails cannot include dynamic data-driven content such as tables or repeating sections.

With Floe you can create tailored and dynamic emails for a recipient list direct from SAP Business Suite. You can generate the recipient lists from SAP customers, suppliers or employees, upload lists from Excel or maintain the lists manually. Floe adds the ability to tailor each email to the recipient based on SAP data, adding dynamic content as required.

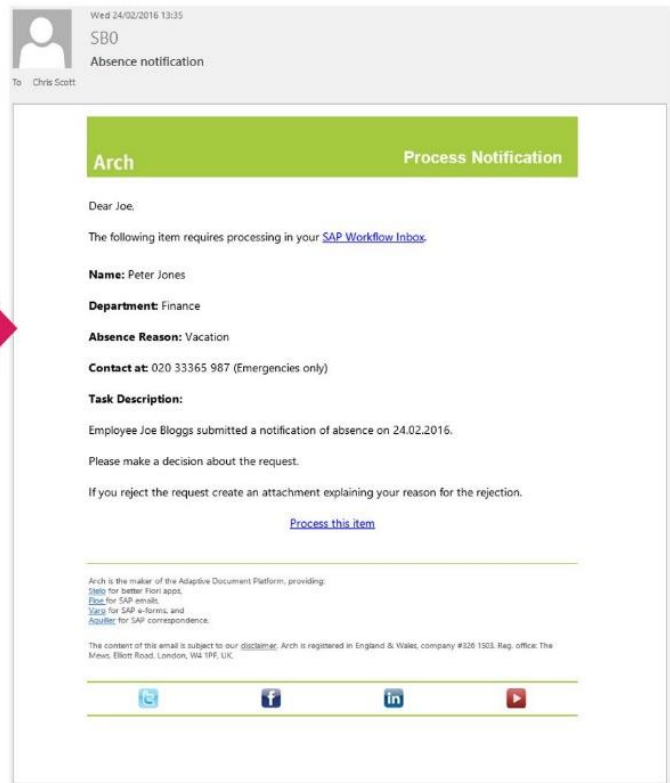
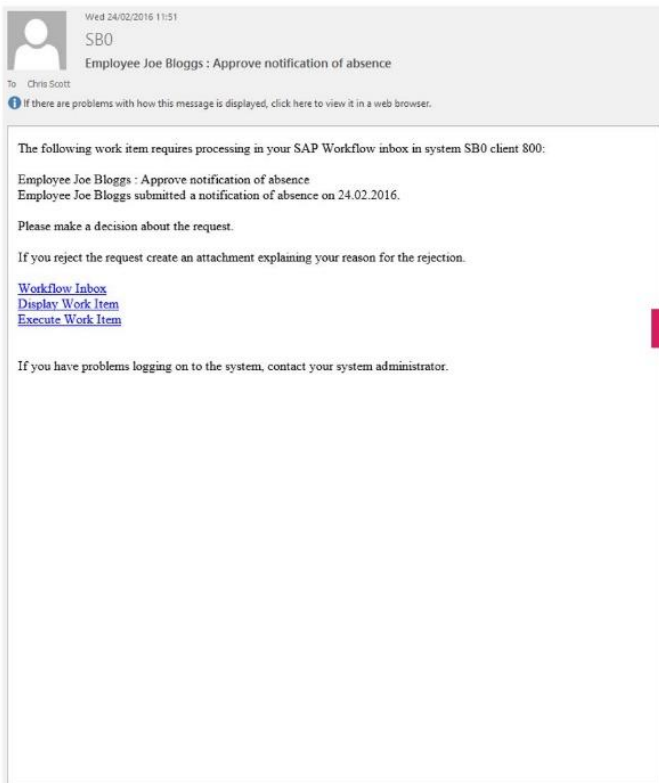
In this way, the same email can look different for each recipient, containing different paragraphs, links, images or attachments. This makes Floe emails much more compelling than web-based marketing email solutions.



### Dynamic Process Notifications

As more processes have become automated, the need for system-triggered notifications has risen. The business rules for the generation of such notifications can be complex, with different messages created for different recipient communities.

For example, during a new joiner process, notifications with different content may be required for IT, Facilities, Payroll and HR Administration teams, because the some content is sensitive and other content is not relevant to the particular teams.

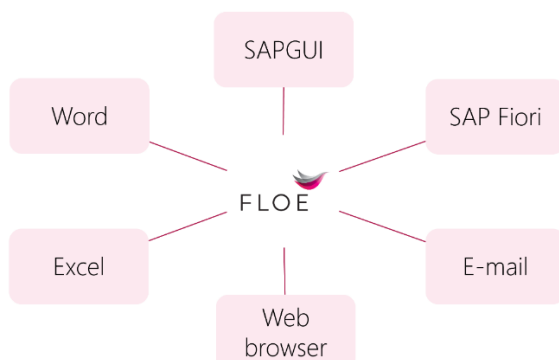


With Floe, automatic notifications messages are engaging in design and content. Floe enables the delivery of chic business communication on any device to keep user communities informed about process statuses and resulting SAP documents.

The Floe email can link to on-line content on the Enterprise Portal or external resources, incorporating corporate images and branding managed by your business users.

### Reporting for multiple UIs

Floe can be used to generate reports that can be consumed by many apps, browsers and devices. With Floe you can define beautifully-formatted reports, typically sent as email attachments, ready for Excel, Word and many other applications.



### Floe and Fiori

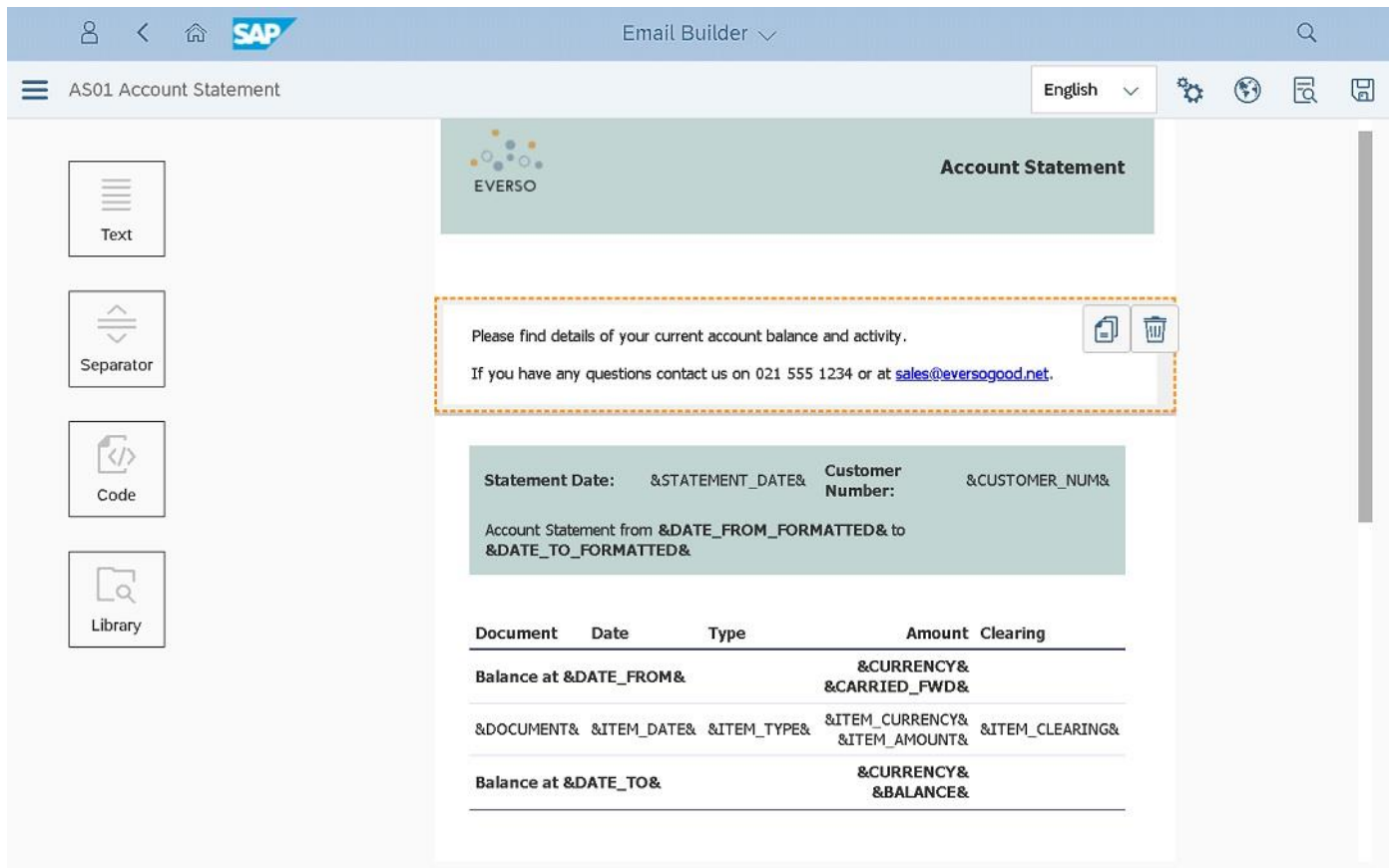
Floe can be used with Fiori in two different ways to improve the user experience:

- **Floe for SAP Workflow notifications**

For apps that trigger an SAP Workflow, the Workflow can be configured to trigger Floe to compose the email, using any information in the Workflow container. Floe provides a much easier way to manage the email body content, which can be different based on the type of app and data.

- **Floe for Stelo notifications**

Stelo is a Fiori app generator from Arch for the accelerated delivery of custom Fiori apps. Stelo includes Floe integration out-of-the-box, so that Floe notifications can easily be triggered without the need for any development in ABAP, SAP Workflow or SAP Gateway.



The screenshot displays the Floe Email Builder interface within the SAP S/4HANA environment. The top navigation bar includes the SAP logo, a search icon, and the text 'Email Builder'. Below this, the breadcrumb 'AS01 Account Statement' is visible. The main workspace shows a preview of an email template for 'EVERSO'. The template includes a header with the EVERSO logo, a body section with a dashed orange border containing text about account balance and activity, and a table with account statement details. The table has columns for Document, Date, Type, Amount, and Clearing. The footer area contains a library icon.

**Account Statement**

EVERSO

Please find details of your current account balance and activity.  
If you have any questions contact us on 021 555 1234 or at [sales@eversogood.net](mailto:sales@eversogood.net).

Statement Date: &STATEMENT\_DATE& Customer Number: &CUSTOMER\_NUM&  
Account Statement from &DATE\_FROM\_FORMATTED& to &DATE\_TO\_FORMATTED&

Document	Date	Type	Amount	Clearing
Balance at &DATE_FROM&			&CURRENCY& &CARRIED_FWD&	
&DOCUMENT&	&ITEM_DATE&	&ITEM_TYPE&	&ITEM_CURRENCY& &ITEM_AMOUNT&	&ITEM_CLEARING&
Balance at &DATE_TO&			&CURRENCY& &BALANCE&	

Text  
Separator  
Code  
Library

Floe Email Builder is a SAPUI5 application which enables business users to define and manage SAP emails quickly and easily.

Using Floe Email Builder, business users have control of SAP output content for the first time, so changes can be made much more quickly.

It is easy to change text, branding, links or marketing banners. Business users can be empowered to deliver compelling email content and maintain it without involving IT: The email content can be treated as 'master data' and updated directly in the production system. This means that changes are instantaneous.

Using Floe Email Builder, users can deliver:

- Polished communication
- Intelligent content
- Extraordinary integration
- Exquisite results

The Email Builder app provides three main functions:

- **Manage Emails**  
Create and change email content, including tables, images and links in multiple languages.
- **Manage Library**  
Create and change library content which can be used across multiple email types.
- **Preview and Test**  
Preview and send a test email in order to check the final email on multiple devices.





### Branding

Reinforce your Corporate Image

Dear Jack,

We have now received payment for your order.

Many Thanks!

Order Number	14737
Delivery Number	800007222
Invoice Number	901124533

Subtotal	\$ 15,345
Tax	\$ 1,035
<b>Total</b>	<b>\$ 16,380</b>

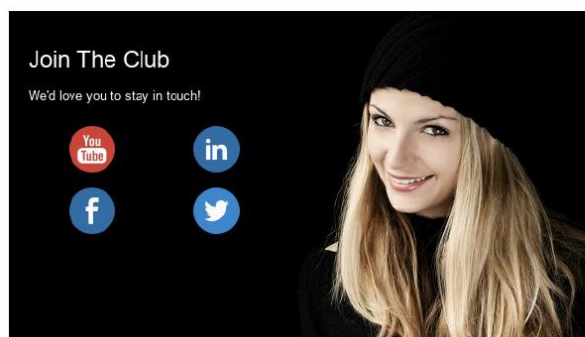
Payment received on April 10, 2019

### Personalization

Tailor content for each recipient

### Document information

Data from one or many SAP documents



### Images and Charts

Include rich graphical content

### Social Media

Cultivate a fan club of online followers



[Mail us](#)



[Find out more](#)



021 555 12 34

### Links

Enable recipients to consume online content



### Marketing Banners

Push core messaging in every communication

With Floe business users drag and drop content to build new email templates, add branding, banners and other graphical content to create a compelling user experience.

### Floe Benefits

Implementing Floe offers many benefits, both tangible and intangible.

#### Tangible benefits

Introducing Floe can enable one or more cost savings, such as:

- **Reduced cost of printing and postage.**  
Use Floe as part of an initiative to move more customers to email.
- **Reduced cost of 3<sup>rd</sup> party email solutions.**  
Use Floe to replace a 3<sup>rd</sup> party solution.
- **Reduced cost of document storage.**  
Use Floe to replace PDF output with HTML email this results in an enormous reduction in the size of documents to be stored.
- **Reduced cost of SAP output / correspondence maintenance.**  
As changes can be made more quickly, and usually by business users, there will be a reduction in the cost of ongoing maintenance for SAPScripts, SMARTFORMS and Adobe forms.

Depending on particular circumstances there may be a business case for Floe based purely on cost savings. Other tangible benefits are focussed on IT improvements, specifically where PDF attachments are replaced with HTML emails.

In those instances where the PDF attachment can be eliminated entirely, the benefits include:

- **Reduced work for email server.**  
As each email is much smaller (typically more than 50 times smaller) then the amount of processing power to process each email is greatly reduced.
- **Reduced database size for email server.**  
As each email is much smaller, the email database size will be reduced.
- **Fast output performance.**  
As there is no PDF rendering, there is a huge performance improvement within the SAP system.
- **No separate hardware required.**  
Floe emails are rendered on the SAP ABAP stack, so no JAVA stack or separate SAP instance is required.
- **No firewall issues.**  
Since no attachments need to be included.
- **Much smaller data packet to send.**  
The bandwidth required to send and receive each email is reduced, freeing up much-needed bandwidth for other tasks.

- **Much smaller data storage required.**

The email document can be saved in SAP or in a separate content server with greatly reduced storage requirements.

#### Intangible benefits

Floe enables you to build better SAP Emails. This means you can:

- Produce top-quality email communication for your business communities.
- Replace your existing plain emails with dynamic, personalised, graphical content. Include branding, social media links and information tailored to each individual recipient.
- Extend your SAP UX strategy beyond SAP Fiori.

This brings benefits for sales & customer service, marketing and IT:

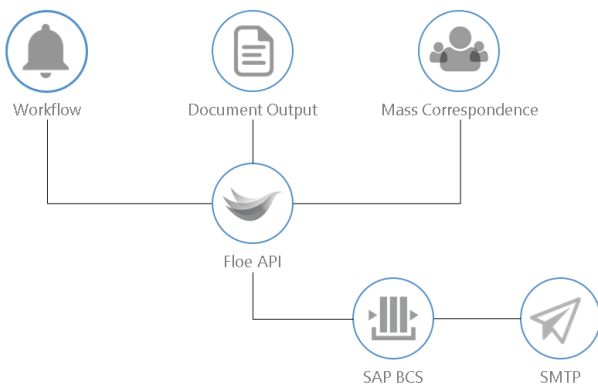
- Deliver an exceptional experience for your business community.
- Provide better service, keeping customers informed in an easily consumable format.
- Offer promotions and incentives, which can be tailored to each recipient, increasing the likelihood of more sales.
- Through careful design you can reinforce your brand and champion your values.
- Through additional content and links you can educate your business community and drive website traffic, which in turn can improve search engine optimization.
- Through social media links and content you can cultivate your own social media followers and fan club.
- If you have a digital transformation strategy you can help deliver this by reaching more user touch-points.
- Better internal emails also contribute to your SAP UX strategy.

A business case for Floe may be supported entirely by these intangible benefits, as a key part of your digital transformation, UX or customer experience strategy.

### The Floe API

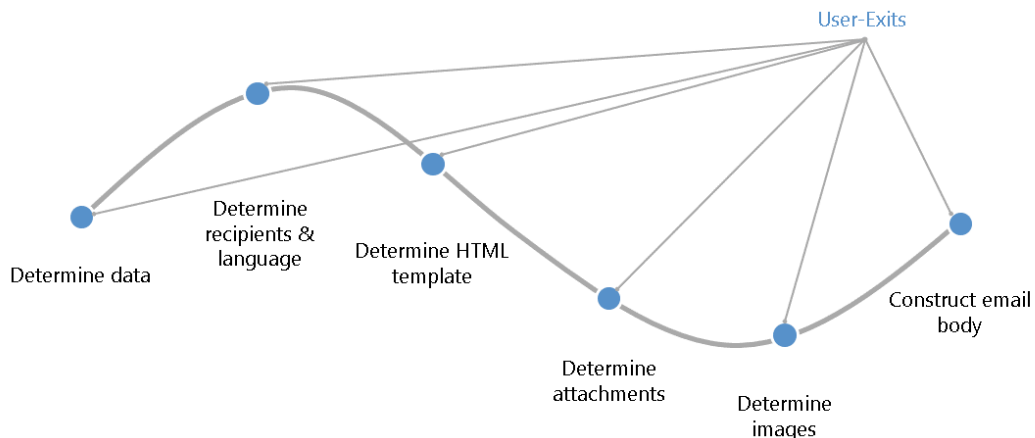
Floe is delivered as an API, and can be triggered from anywhere. For the main use cases, the API is triggered either from a SAP workflow step, or a print program, or from the mass correspondence tool that is included as part of Floe.

In all cases, the Floe API constructs the email and passes it to the SAP Business Communication Service, which in turn routes it to an outbound SMTP Server.



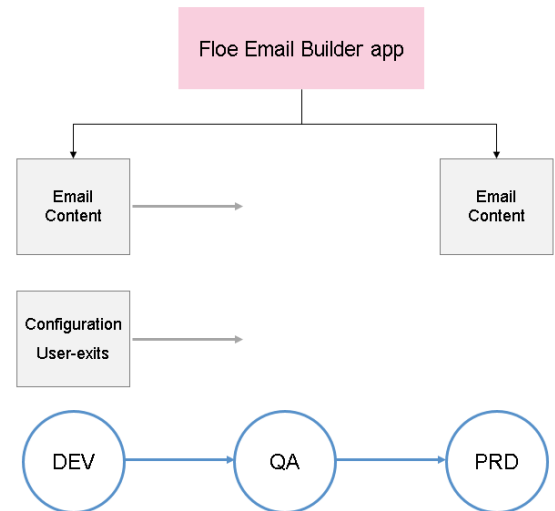
The Floe API collects data, template and other information and constructs the email. In some cases, the data is passed into the API. In other cases an SAP document/object number is passed in and then Floe will collect the required data. This type of logic is managed using ABAP user-exits.

Each email template can be built dynamically from multiple 'content blocks', enabling the email content to be driven by the SAP data and business logic. Recipients, images and attachments can be determined from business logic stored within the SAP system. The Floe user-exits provide the capability to programmatically over-ride SAP data and content blocks in order to dynamically create tailored emails at run-time.



### Managing Email Content

Each organisation can choose whether to manage email content in their development system (and push it through the SAP landscape using transport requests) or as master data directly in the production system. A mixture of both is possible too, with some email content locked for changes in production, and other content available to be maintained by business users.



The Email Builder app can be linked to the production system or the development system, or deployed more than once to maintain content in more than one place if required.

A utility is provided to copy email content created in the production system back to other SAP systems.

Email configuration and user-exit code is created in the development system and migrated using transport requests as normal.



### Business Analyst

Describes the business requirement and configures the email type in the SAP IMG



### Developer

Builds API call and user-exit logic in ABAP if required



### Business User

Creates email content for the email type using the Floe Email Builder app

## Installation and Pre-requisites

### **Back-end core**

Floe is an ABAP Add-on, the installs on top of your SAP solution.

Floe requires a SAP Netweaver 7.0 application server (or above), with the ABAP and BASIS components installed. (SAP\_ABA 700, SAP\_BASIS 700).

Typically Floe is installed on your back-end SAP system (SAP ERP or S/4HANA) but it can be separately hosted.

The SAP system must be connected to an SMTP server for outbound email traffic.

Users configure emails using Floe through the SAP IMG.

### **Email Builder app**

The Email Builder app requires SAP Gateway to be installed. The back-end core includes the service definition.

The app can be deployed to the SAP Cloud or to an ABAP system.

It can be added to the Fiori LaunchPad. It can run natively inside the Fiori LaunchPad if the available SAPUI5 version is 1.60 or above. Alternatively it can run as a standalone app outside the Fiori LaunchPad with no dependency on the installed SAPUI5 version.



## Summary

With Floe organisations can:

- **Transform SAP communication**

Improve every SAP email. Deliver awesome email content inside the organisation and to external contacts. Replace plain emails with dynamic, personalised, graphical content. Include branding, social media links and information tailored to each individual recipient.

- **Replace PDF attachments**

Design for your customers and deliver rich dynamic content, driven by SAP document data, which looks great on any device.

- **Empower business users**

Enable business users to own SAP communication content for the first time: No more waiting for IT.

- **Build compelling SAP emails with ease**

Manage email content as master data, editable in the production system by key business users.

- **Extend SAP UX strategy beyond SAP Fiori**

Reach user communities who are not using the SAP system directly; embrace every user touchpoint.