

Mailytica

Auto-generated Email Responses:

**Boost your email
efficiency**

Mailytica



Email is dead (again).

Email is alive (again).

Mailytica ●●●●●



Worldwide Daily Email

Traffic: **269 Billion in 2017**



Emails handled by
an office worker:

121 per day



Average hours spend for
emails:

3.3 per working day



**72% of consumers
prefer email** as their
source of business
communication



Speed matters:

Responses are expected

in near-realtime



Context & Information matters:
**Response should be aligned
to request**



- But who likes to be engaged in emails for half their working time?
- Aren't there more important things to do?
- How often is the same email written again and again?



Imagine...

**...if topics of your emails
are automatically
detected?**

Mailytica ● ● ● ● ● ●



Imagine...

**...if email responses
are automatically
drafted based on the
detected topics?**

Mailytica ●●●●●



Imagine...

**...if email responses
automatically contain high
degree of context and
information?**

Mailytica ●●●●●



What is **Mailytica**?



Email Classification

Classifies incoming emails according to customer-specific topics, urgency, sentiments



Email Smart Responses

Generates Email Smart Responses based on customer specific language



Email Routing

Assigns incoming emails to specific email boxes according to classified topics



Email Text Analytics

Recognizes dates, locations, measurements and customer-specific facts or entities

How does **Mailytica** work?

1

Natural Language Processing

- ✓ Tokenization
- ✓ Lemmatization
- ✓ Term weight discrimination
- ✓ Entity annotation
- ✓ Fact annotation
- ✓ Language detection

2

Machine Learning

- ✓ Topic models for topic detection
- ✓ Classification models for email classification

3

Natural Language Generation

- ✓ Language Models trained on customer – specific email history for Email Smart Response

How does Mailytica work?

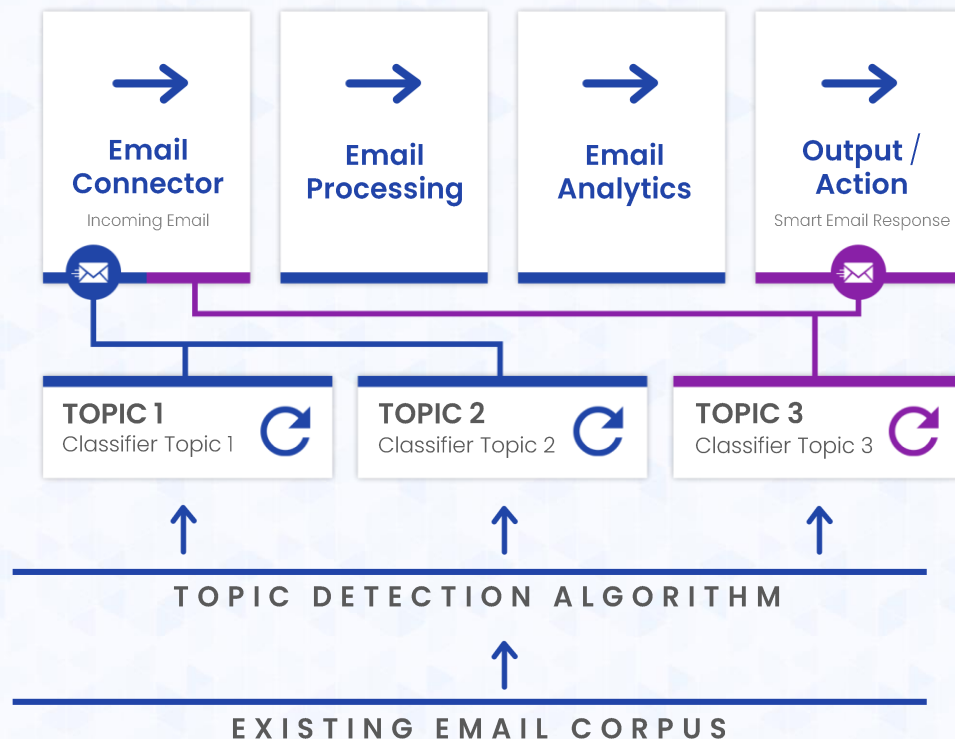
Production Phase

All incoming emails are constantly screened by an algorithm. This algorithm, called “Email Classifier”, does make an evaluation on basis of each single topic.

Unambiguity, precision and a confidence – factor decide upon the allocation. Therefore, each email passes a Machine Learning pipeline with four steps.





Preparation Phase

All existing emails are classified by the “Topic Detection Algorithm” to any desired number of business transactions (topics).







Mailytica **Email Processing Pipeline**



-  Email Connector
-  Email Processing
-  Email Classification
-  Email Smart Response

Mailytica **Email Processing Pipeline**







-  **Email Connector**
-  **Email Processing**
-  **Email Classification**
-  **Email Smart Response**

Email Connector

- ✓ Integration to email box
- ✓ SMTP, POP3 or specific APIs (e.g. Gmail, Outlook)
- ✓ User - Interface

Mailytica **Email Processing Pipeline**



-  **Email Connector**
-  **Email Processing**
-  **Email Classification**
-  **Email Smart Response**

Email Processing

- Email Cleansing, Annotation of paragraphs, sentences and tokens, Lemmatization, Term Discrimination, Stop Word Filter
- Email Text Analytics

Mailytica **Email Processing Pipeline**



Email Connector



Email Processing



Email Classification







Email Smart Response

Email Classification

- ✓ Classification and allocation of best matching topic
- ✓ Precision adjustable for each topic individually
- ✓ Utilization of confidence and unambiguity to eliminate false positives

Mailytica **Email Processing Pipeline**



-  **Email Connector**
-  **Email Processing**
-  **Email Analytics**
-  **Email Smart Response**

Email Smart Response

- ✓ Best fitting response proposed by Natural Language Generation
- ✓ Email draft with Smart Response is pushed to email box
- ✓ User can adjust, overwrite or delete proposed Smart Response

Request for delivery time

Inbox x



Timo Streich

to me

Hi,

I urgently need 300 business cards. The order number last time was PO21349. What is your fastest delivery time?

Kind regards,
Timo Streich

Reply

Smart - Response

Request for delivery time

Inbox x



Timo Streich

to me

Hi,

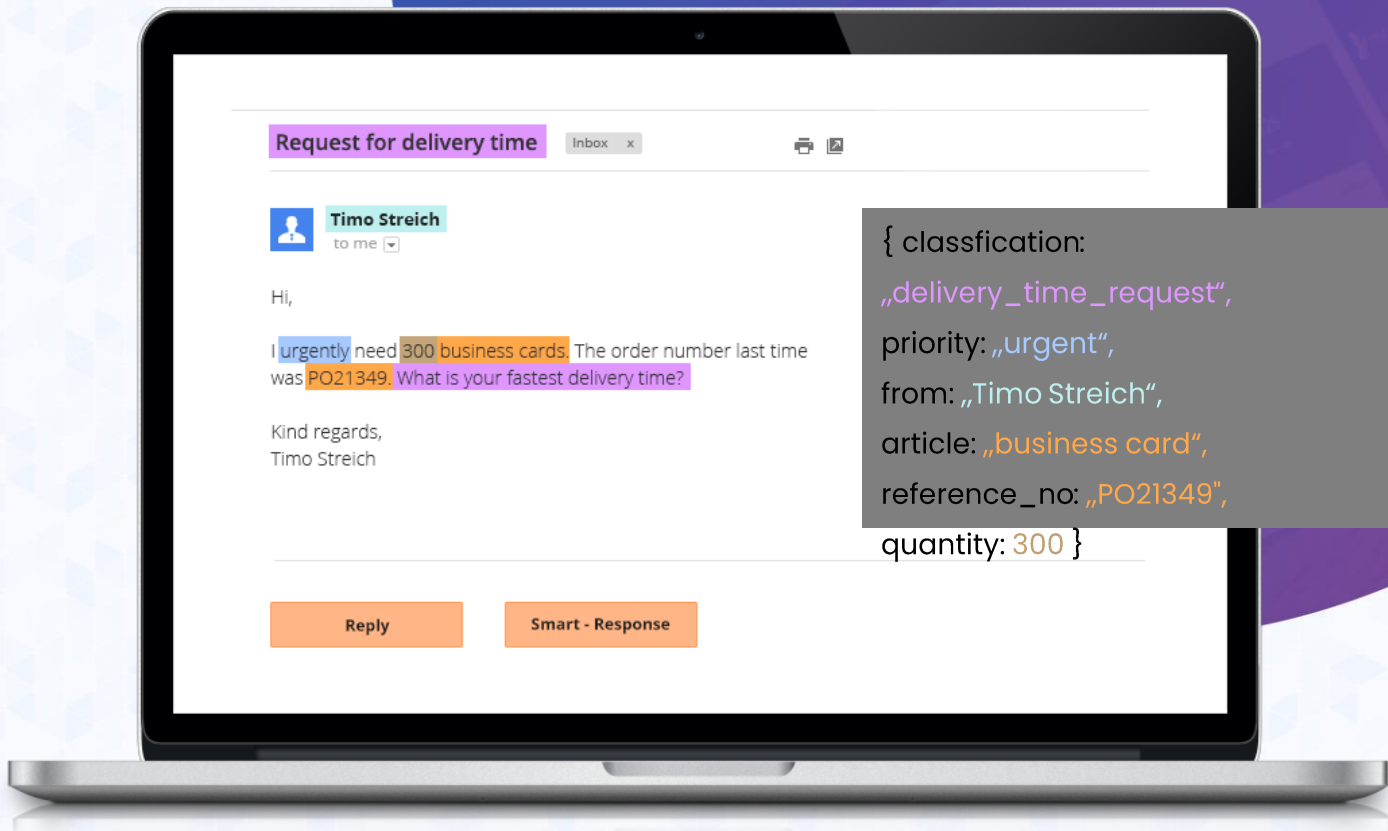
I urgently need 300 business cards. The order number last time was PO21349. What is your fastest delivery time?

Kind regards,
Timo Streich

Reply

Smart - Response





Request for delivery time

Inbox x



Timo Streich

to me

Hi,

I urgently need 300 business cards. The order number last time was PO21349. What is your fastest delivery time?

Kind regards,
Timo Streich

Reply

Smart - Response

```
{ classification:
  „delivery_time_request“,
  priority: „urgent“,
  from: „Timo Streich“,
  article: „business card“,
  reference_no: „PO21349“,
  quantity: 300 }
```


Request for delivery time

Inbox x



← Reply to: **Timo Streich**

Dear Timo,

thank you for your request of **300 business cards**.

You mentioned a fast delivery.

We can ship them within one week. Please let me know if this is ok for you.

Kind regards,

Tina

Send

Mailytica **Email Automation**

Email Classification & Smart-Response

✓ **Automated training**

No manual labeling required

✓ **Self - learning**

Algorithm is improving with each new case

✓ **Easy integration**

Easy Integration with other systems

✓ **Customer specific models**

Topics and language models are unique for each customer

✓ **Improved efficiency**

Email drafts are composed in seconds

✓ **Highly scalable**

Peaks and growing number of emails can be easily handled

How does **the algorithm improve?**

1

New email with automatic Smart Response

- ✓ Each new email with Smart Response is also used for training purposes. It does refine the corresponding topic.

2

Emails without automatic Smart Response

- ✓ If no Smart Response can be generated, an answer has to be made manually.
- ✓ The manual answer will be trained to the classifier of the topic, meaning that it will improve in future.

3

Wrong Smart Response

- ✓ False Positives are analyzed by the classifier as well. This does increase the precision at future decisions.

Mailytica

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