How does the OA Switchboard router work?
• Routing via auto-cc
• Consortia routing
• Routing via auto-cc
• Consortia routing
Publisher sends P1-message to institution*) of first author’s first affiliation

OA Switchboard (Message hub)

Sending a P1-message

Relaying the P1-message

Publisher

Institution 1.1

*) The ROR id is required, otherwise the message can’t be sent.

If the ROR id is available, but that institution is not a ‘participant’ (so, hasn’t signed the Service Agreement, and doesn’t have an account in OA Switchboard yet), there are two options:
- OA Switchboard knows the institution as ‘organisation’, and the message will get the status ‘undelivered’, OR
- OA Switchboard doesn’t know the institution as ‘organisation’, and the message ends up in the Dead Letter Queue (DLQ)
2022 ROUTING VIA AUTO-CC
The OA Switchboard auto-cc feature sends a PIO (Public Information Only) version of that P1-message to the second author’s first affiliation.*

*) Provided the publisher has ‘auto-CC’ switched on AND the publisher provided a ROR id in the original P1-message for the affiliation of the second author
The OA Switchboard auto-cc feature sends a PIO (Public Information Only) version of that P1-message to the n<sup>th</sup> author’s first affiliation*)

*) Provided the publisher has ‘auto-CC’ switched on AND the publisher provided a ROR id in the original P1-message for the affiliation of the n<sup>th</sup> author
The OA Switchboard auto-cc feature sends a PIO (Public Information Only) version of that P1-message to the first research funder**

**) Provided the publisher has ‘auto-CC’ switched on AND the publisher provided a ROR id in the original P1-message for the first research funder
The OA Switchboard auto-cc feature sends a PIO (Public Information Only) version of that P1-message to the second research funder**)

**) Provided the publisher has 'auto-CC' switched on AND the publisher provided a ROR id in the original P1-message for the second research funder
The OA Switchboard auto-cc feature sends a PIO (Public Information Only) version of that P1-message to the \( n^{th} \) research funder**)

**) Provided the publisher has ‘auto-CC’ switched on AND the publisher provided a ROR id in the original P1-message for the \( n^{th} \) research funder
CORE ROUTER UPDATE (February 2023)

ROUTING VIA AUTO-CC

--- NEW! ---
Publisher sends P1-message to institution of first author’s first affiliation, the updated OA Switchboard auto-cc feature sends a PIO (Public Information Only) version of that P1-message now also to the first author’s second to m\(^{th}\) affiliation.
Publisher sends P1-message to institution of first author’s first affiliation, the updated OA Switchboard auto-cc feature sends a PIO (Public Information Only) version of that P1-message now also to the second author’s second to m\textsuperscript{th} affiliation.
Publisher sends P1-message to institution of first author’s first affiliation, the updated OA Switchboard auto-cc feature sends a PIO (Public Information Only) version of that P1-message now also to the n\textsuperscript{th} author’s second to m\textsuperscript{th} affiliation.
2022 CONSORTIA ROUTING
Publisher sends ‘Prior Agreement’ (PA) P1-message to institution of first author’s first affiliation, OA Switchboard delivers the same to consortium.
Publisher sends ‘No-Prior-Agreement’ (NPA) P1-message to institution of first author’s first affiliation, OA Switchboard delivers a P1-PIO version of that P1-message to consortium.
Publisher sends P1-PIO message to institution of first author’s first affiliation, OA Switchboard delivers the same to consortium.
CORE ROUTER UPDATE (February 2023)

CONSORTIA ROUTING

--- NEW! ---
Publisher sends ‘Prior Agreement’ (PA) P1-message to institution of first author’s first affiliation, OA Switchboard delivers the same to consortium, and the updated OA Switchboard consortia routing now also delivers a P1-PIO version of that message to consortia related to the second to m\textsuperscript{th} affiliation of the first author.
Publisher sends ‘No-Prior-Agreement’ (NPA) P1-message to institution of first author’s first affiliation, OA Switchboard delivers the same to consortium, and the updated OA Switchboard consortia routing now also delivers a P1-PIO version of that message to consortia related to the second to mth affiliation of the first author.
Publisher sends P1-PIO message to institution of first author's first affiliation, OA Switchboard delivers the same to consortium, and the updated OA Switchboard consortia routing now also delivers this P1-PIO message to consortia related to the second to mth affiliation of the first author.
This consortia routing of P1-PIO messages also works for the first to \(m^{th}\) affiliation of the second to \(n^{th}\) author.
APPENDIX: CONTEXT
Central metadata exchange hub

Standardised messaging protocol and shared infrastructure

Sending a message

Relaying the message

Relaying the response message

Sending a response message

Stakeholder 1

OA Switchboard (Message hub)

Stakeholder 2

Central metadata exchange hub

Standardised messaging protocol and shared infrastructure

Sending a message

Relaying the message

Relaying the response message

Sending a response message

Stakeholder 1

OA Switchboard (Message hub)

Stakeholder 2

Central metadata exchange hub

Standardised messaging protocol and shared infrastructure

Sending a message

Relaying the message

Relaying the response message

Sending a response message

Stakeholder 1

OA Switchboard (Message hub)

Stakeholder 2

Central metadata exchange hub

Standardised messaging protocol and shared infrastructure

Sending a message

Relaying the message

Relaying the response message

Sending a response message

Stakeholder 1

OA Switchboard (Message hub)

Stakeholder 2
USE CASE 1: Publication notification and reporting

Current set-up for most OA Switchboard publishers

Publisher

Sending a message

(custom connector*)

with private datastore(**)

OA Switchboard (Message hub)

Relaying the message

Institution or Funder

*) Often including the ‘smart matching’ module to obtain ROR id’s (on author affiliations and research funders) from:
- Free text (via ROR API)
- Ringgold id (based on publisher’s Ringgold license, if in place)
- ORCID id (via ORCID API)

**) Sometimes including a UI (‘publication tracker’) for management information
Receive Data

Generate ‘events’ & apply business rules

Compose and send message

Private datastore to deal with a-synchronous data and to build article life cycle metadata

Editorial process details

Publication (VoR) details

Deal information

Publication-level financial information

Journal master data

Other publisher-specific sources

Generic reverse connector(s) to source from multiple systems and data feeds

Publisher’s customer connector with private datastore
USE CASE 1: Publication notification and reporting
Set-up for publishers connecting to the OA Switchboard API directly

Publisher’s own solution*)

Publisher

Sending a message

OA Switchboard (Message hub)

Relaying the message

Institution or Funder

*) Publishers, connecting to the OA Switchboard API directly, have the option to first make use of the ‘suggester’ function**) of the OA Switchboard, before determining a ROR id for the ‘send-to’. They can obtain ROR id’s (on author affiliations and research funders) from:
- Free text (via ROR API)
- Ringgold id (based on publisher’s Ringgold license, if in place)
- ORCID id (via ORCID API)

**) Also (with free text to ROR id via the ROR API only) available in the OA Switchboard UI, for those publishers composing messages manually.
APPENDIX: CORE ROUTER UPDATE

UPDATED (RELEVANT ONLY) SLIDES
AS USED IN MESSAGE STRUCTURE WORKING GROUP MEETING (6 FEBRUARY 2023)
Message lifecycle

API
Amazon API Gateway

Validation

Queue

Router

Notifications

Store

Internet

UI

Notifications

{api}
Router per message workflow

The router workflow consists of 2x3 steps

Receiver discovery

Receiver expansion
If feature enabled: Auto CC, dedup receivers

Receiver mapping
Mapping of alternative PIDs

Route expansion
Consortia routing

Route processing

Message pre-formatting
Add routing data to header, create Group ID

Message persistence
Store message (header) data, create ID per message

Message delivery
Receiver and Sender Notification(s)

1x SENDTO

• Msg#1, extraction=sendto, rules=primary, route=default, notification=email
• Msg#2, extraction=institutions, rules=cc, route=default, notification=webhook+email
• Msg#3, extraction=institutions, rules=cc, route=consortia, notifications=none
• Msg#4, extraction=institutions, rules=dlq
• Msg#5, extraction=funders, rules=cc, route=default

Add routing data to header, create Group ID

email

webhook(s)

sender notification
What happens in step 2?

What does ‘mapping of alternative PIDs’ mean?

If author affiliation in P1-message includes:

• **Free text only**: It is not mapped to anything (that affiliation doesn’t receive a P1)
• **Ringgold id**: It is not mapped to anything (that affiliation doesn’t receive a P1)
• **ISNI**: It is mapped to a ROR id, but only for organisations known in OA Switchboard. The P1-message (PIO) is sent to that affiliation.

If research funder in P1-message includes:

• **Free text only**: It is not mapped to anything (that funder doesn’t receive a P1)
• **Fundref id**: It is mapped to ROR id, but only for organisations known in OA Switchboard. The P1-message (PIO) is sent to that research funder.