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TDH – Expressions of Public Interest (Food) – Architecture

CONTRATTO ESECUTIVO PER L'AFFIDAMENTO DI "TOURISM DIGITAL HUB - TDH" MEDIANTE ORDINATIVO DI FORNITURA NELL'AMBITO DELL'ACCORDO QUADRO PER I SERVIZI APPLICATIVI PER LE PUBBLICHE AMMINISTRAZIONI STIPULATO DA CONSIP - ID 2212 – LOTTO 1

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TABLE OF CONTENTS

1	Purpose of the document.....	4
2	Acronyms and definitions.....	4
3	Put Destination interface.....	4
3.1	Put Destination – Swagger	5
3.1.1	Put Destination – Request	5
3.1.2	Put Destination – Response	10
4	Delete Destination interface	10
4.1	Delete Destination – Swagger	10
4.1.1	Delete Destination – Request	10
4.1.2	Delete Destination – Response	11
5	Put Menu interface.....	11
5.1	Put Menu – Swagger.....	12
5.1.1	Put Menu – Request.....	12
5.1.2	Put Menu – Response	15
6	Delete Menu Interface	15
6.1	Delete Menu – Swagger	15
6.1.1	Delete Menu – Request.....	16
6.1.2	Delete Menu – Response	16
7	API to be exposed by Catering Partners.....	16
7.1	SLA assumed volumes of the APIs exposed by Catering Partners side	17

1 Purpose of the document

The purpose of the document is the sharing of architectural information about the implementation of the Interconnection APIs between the TDH and Catering operators who want to enroll on it. In this regard, the following interconnection APIs should be considered:

- *Put Destination*
- *Delete Destination*
- *Put Menu*
- *Delete Menu*
- *Put ContentOfInterest*
- *Delete ContentOfInterest*

By means of APIs just mentioned then, Catering operators enrolled on Tourism Digital Hub (TDH) will be able to export information about their business and/or delete it (Put/Delete Destination) as well as export their menu offerings and/or delete them (Put/Delete Menu); finally, it will be able to export information about a content of interest linked to a certain destination and/or delete it (Put/Delete ContentofInterest).

2 Acronyms and definitions

Acronym	Description
AEM	Adobe Experience Manager
API	Application Program Interface
REST	REpresentational State Transfer
SOAP	Simple Object Access Protocol
TDH	Tourism Digital Hub

Table 1 – Acronyms and definitions

3 Put Destination interface

This web API will allow Users to interface with TDH022, by communicating destinations; in particular, it will be possible to view business operators in the Catering sector.

The specifications of this API are given:

- *Source:* Third Parties (Third Parties displaying content on the TDH)
- *Target:* AEM
- *Update type:* Synchronous (real-time content update)
- *Trigger:* On call
- *Typology:* Create (new data stream creation) and Update (existing flow editing)
- *Integration mode:* REST and SOAP
- *Methodology:* Put

3.1 Put Destination – Swagger

The swagger and its fields (with description) are given below in order to connect via API.

3.1.1 Put Destination – Request

Parameters:

Name	Type	Description
reqTimestamp(<i>header</i>)	string	Timing at which the call was made. e.g. "1640019167"
source (<i>header</i>)	string	Source system. This field is unique and should be agreed with the TDH022, e.g. "RegionePuglia". The length of the string is 50
e2eKey (<i>header</i>)	string	Unique key of the entire transaction. The length of the string is 50, e.g. "1232432eeer23"
putDestinationRequest (*) ¹ (<i>body</i>)	object	Sample Description

Table 2 - Put Destination Request structure

Body:

Name	Type	Description
Destination	object	putDestination service root
Destination.identifier	string	Unique key of size 50 of the destination identification sender system
Destination.destinationName	string	String of size 200. Indicates the name of the destination
Destination.shortDescription	string	Short description of size 200
Destination.longDescription	string	Long description of size 5000
Destination.language	string[]	String of size 2. Represents the code of the language in which the record is written according to ISO639-1
Destination.owner	String	String of size 200
Destination.address	object	Structure containing address information
Destination.address.zipCode	string	String of size 50. This is the postcode of the destination
Destination.address.country	string	String of size 50. This is the State in which the destination is located
Destination.address.streetName	string	String of size 50. Indicates the street name of where the destination is located
Destination.address.streetToponym	string	String of size 50. Refer to the list of INAIL toponyms at the following link https://www.inail.it/cs/internet/docs/ucm_085810.pdf?section=attivita .

¹ Required field

Destination.address.province	string	String of dimension 50. This is the province in which the destination is located
Destination.address.city	string	String of size 50. This is the city in which the destination is located
Destination.address.streetNumber	string	String of size 50. House number identifying the external access, i.e. that which leads from the circulation area to the simple geographical units (dwellings, offices, etc.)
Destination.address.district	string	String of size 50. Indicates the neighbourhood where the destination is located
Destination.address.fullAddress	string	String of size 255. This is the full address at which the destination is normalised by Google.
Destination.address.region	string	String of size 50. This is the region in which the destination is located
Destination.addressArea	string	Enum geographical designation: [APAC, LATAM, EMEA, MEMEA, IMEA].
Destination.geoDistribution	string	Represents the geographical area within the country where the Enum destination is located: [northeast, islands, south, northwest, centre, north].
Destination.longitude	string	Longitude of destination preferably expressed in the WGS84 coordinate system
Destination.latitude	string	Latitude of destination preferably expressed in the WGS84 coordinate system
Destination.altitude	string	Altitude of destination preferably expressed in the WGS84 coordinate system
Destination.geometryType	string	Enum: [POLYGON, POINT, LINE, BOX].
Destination.coordinateSystemref	string	Represents the reference system for the representation of coordinates
Destination.email	string	Destination e-mail address
Destination.phoneNumber	string	Destination telephone number
Destination.website	string	Destination website
Destination.openingHours	string[]	Opening Hourse
Destination.destinationStatus	string	Open or Closed
Destination.destinationCategory	string	Category
Destination.theme	string	Architectural, Health...
Destination.services	object	Structure containing services offered by the destination
Destination.services.otherServices	string	Free text for any other services
Destination.services.listOfServices	string[]	List of services available according to a predefined list (e.g. toilets, audioguide). stringEnum: [

		disability-physical, lift, audio-guides, baby-area, bus, luggage-storage, disability-cognitive, disability-hearing, disability-visual, cloakroom, info, bike-rental, parking, pet, refreshments, services-hygiene, shop, guided-visits, wi-fi, non-smoking rooms, family-room-availability, reception-24-hours-a-day, pets-allowed, gym, airport-shuttle, room-service, rooms-facilities-for-disabled-guests, restaurant, spa, swimming-pool, electric-vehicle-charging-station, children's menus, German-speaking languages, French-speaking languages, Spanish-speaking languages, bathroom-for-disabled-guests, smoking area]]
Destination.linkedDestination	string[]	Destinations linked to the individual destination
Destination.Paragraph	object	Structure containing paragraph information
Destination.Paragraph.identifier	string	Unique key of size 50 identifying the paragraph
Destination.Paragraph.paragraphText	string	Article text in UTF-8
Destination.Paragraph.paragraphTitle	string[]	String of length 200. It is the paragraph title of the article
Destination.Paragraph.Media	object[]	Structure containing the media in the paragraph
Destination.Paragraph.Media.MediaURL	string	Audio/Video Url
Destination.Paragraph.Media.isExternal	string	Indicates whether it is an audio/video from external sources. Example YouTube
Destination.Paragraph.Media.MediaDescription	string	Audio/Video Description
Destination.Paragraph.Media.MediaCredit	string	Audio/Video Credits
Destination.Paragraph.Media.MediaLicense	string	License code for audio/video use
Destination.Paragraph.Media.MediaLicenseURL	string	Audio/Video License Code URL
Destination.Paragraph.Media.MediaType	string	Indicates if it is an Audio or Video
Destination.Paragraph.Media.MediaEndDate	date	Media expiry date
Destination.Paragraph.Media.MediaTitle	string	Media Title
Destination.Paragraph.paragraphOrder	number	Position of the paragraph within the Article
Destination.Paragraph.Authors	object[]	Structure containing the information of the author who wrote the paragraph
Destination.Paragraph.Authors.authorName	string	String of length 50. Represents the author of the article

Destination.Paragraph.Authors.authorDescription	string	String of length 1000. Author's description
Destination.Paragraph.Authors.AuthorImage	object	Structure containing author-related images
Destination.Paragraph.Authors.AuthorImage.ImageURL	string	Indicates image url
Destination.Paragraph.Authors.AuthorImage.ImageDescription	string	Indicates image description
Destination.Paragraph.Authors.AuthorImage.ImageCredit	string	Indicates the author who owns the image
Destination.Paragraph.Authors.AuthorImage.ImageLicense	string	License code for image use
Destination.Paragraph.Authors.AuthorImage.ImageLicenseURL	string	Image license URL
Destination.Paragraph.Authors.AuthorImage.ImageWidth	number	Image width
Destination.Paragraph.Authors.AuthorImage.ImageHeight	number	Image height
Destination.Paragraph.Authors.AuthorImage.ImageEndDate	date	Image expiry date
Destination.Paragraph.Authors.AuthorImage.ImageTitle	string	Image Title
Destination.Paragraph.destinationID	string[]	Destination Reference
Destination.Paragraph.Image	object	Structure containing article-related images
Destination.Paragraph.Image.ImageURL	string	Indicates image url
Destination.Paragraph.Image.ImageDescription	string	Indicates image description
Destination.Paragraph.Image.ImageCredit	string	Indicates the author who owns the image
Destination.Paragraph.Image.ImageLicense	string	License code for image use
Destination.Paragraph.Image.ImageLicenseURL	string	Image license URL
Destination.Paragraph.Image.ImageWidth	number	Image width
Destination.Paragraph.Image.ImageHeight	number	Image height
Destination.Paragraph.Image.ImageEndDate	date	Image expiry date
Destination.Paragraph.Image.ImageTitle	string	Image Title
Destination.Paragraph.HyperLinks	object[]	Paragraph hyperlink structure
Destination.Paragraph.HyperLinks.identifier	string	Paragraph hyperlink identifier
Destination.Paragraph.HyperLinks.name	string	Hyperlink name

Destination.Paragraph.HyperLinks.description	string	Hyperlink description
Destination.Paragraph.HyperLinks.externalUrl	string	Hyperlink URL
Destination.Paragraph.paragraphSubtitle	string[]	Paragraph subtitles
Destination.Image	object	Structure containing article-related images
Destination.Image.ImageURL	string	Indicates image url
Destination.Image.ImageDescription	string	Indicates image description
Destination.Image.ImageCredit	string	Indicates the author who owns the image
Destination.Image.ImageLicense	string	Image licence code
Destination.Image.ImageLicenseURL	string	Image licence URL
Destination.Image.ImageWidth	number	Image width
Destination.Image.ImageHeight	number	Image height
Destination.Image.ImageEndDate	date	Image expiry date
Destination.Image.ImageTitle	string	Image Title
Destination.Media	object[]	Structure containing the media in the paragraph
Destination.Media.MediaURL	string	Audio/video url
Destination.Media.isExternal	string	Indicates whether it is an audio/video from external sources. Example YouTube
Destination.Media.MediaDescription	string	Audio/video description
Destination.Media.MediaCredit	string	Audio/video credits
Destination.Media.MediaLicense	string	License code for audio/video use
Destination.Media.MediaLicenseURL	string	Audio/video license URL
Destination.Media.MediaType	string	Indicates if it is an Audio or Video
Destination.Media.MediaEndDate	date	Media expiry date
Destination.Media.MediaTitle	string	Media Title
Destination.template	string	Template to be filled in for the Enum call type: [POI, Destination, City, Region].
Destination.feature	object[]	Structure to handle future developments
Destination.feature.id	string	Subject key

Destination.feature.value	string	Value object
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Table 3 - Put Destination Body structure

3.1.2 Put Destination – Response

Code	Field	Type	Description
200	codiceEsito	integer	Outcome of request processing. 1=> OK , 0 => KO . E.g. "1"
	id	string	String of size 50. It indicates the unique key of the TDH022 system that identifies the resource. E.g. "21396293821"
	message	string	String of size 50. IT represents the outcome of request processing. E.g. "Bad Request"
400	codiceEsito	string	Outcome code
500	codiceEsito	string	Outcome code

Table 4 - Put Destination Response structure

4 Delete Destination interface

This web API will allow user to interface with TDH022 by deleting a previously selected destination; specifically, it will be possible to delete catering destinations previously selected by the user.

The specifications of this API are given:

- *Source*: Third Parties (Third Parties displaying content on the TDH)
- *Target*: AEM
- *Update type*: Synchronous (real-time content update)
- *Trigger*: On call
- *Typology*: Create (new data stream creation)
- *Integration mode*: REST and SOAP
- *Methodology*: Delete

4.1 Delete Destination – Swagger

The swagger and its fields (with description) are given below in order to connect via API.

4.1.1 Delete Destination – Request

Parameters:

Name	Type	Description
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reqTimestamp(<i>header</i>)	string	Timing at which the call was made, e.g. "1640019167"
source (<i>header</i>)	string	Source system. This field is unique and should be agreed with TDH022, e.g. "RegionePuglia". The length of the string is 50.
e2eKey (<i>header</i>)	string	Unique key of the entire transaction. The length of the string is 50, e.g. "1232432eeer23"
identifier(*) ² (<i>path</i>)	string	Unique key

Table 5 - Delete Destination Request structure

4.1.2 Delete Destination – Response

Code	Field	Type	Description
200	codiceEsito	integer	Outcome of request processing. 1=> OK , 0 => KO . E.g. "1"
	id	string	String of size 50. It indicates the unique key of the TDH022 system that identifies the resource. E.g. "21396293821"
	message	string	String of size 50. IT represents the outcome of request processing. E.g. "Bad Request"
400	codiceEsito	string	Outcome code
500	codiceEsito	string	Outcome code

Table 6 - Delete Destination Response structure

5 Put Menu interface

This web API will allow the user to interface with the TDH022, by letting him know the menu available at the specific destination selected.

The specifications of this API are given:

- *Source*: Third Parties (Third Parties displaying content on the TDH)
- *Target*: AEM
- *Update type*: Synchronous (real-time content update)
- *Trigger*: On call
- *Typology*: Create (new data stream creation) and Update (existing flow editing)
- *Integration mode*: REST and SOAP
- *Methodology*: Put

² Required Field

5.1 Put Menu – Swagger

The swagger and its fields (with description) are given below in order to connect via API.

5.1.1 Put Menu – Request

Parameters:

Name	Type	Description
reqTimestamp(<i>header</i>)	string	Timing at which the call was made, e.g. "1640019167"
source (<i>header</i>)	string	Source system. This field is unique and should be agreed with TDH022, e.g. "RegionePuglia". The length of the string is 50.
e2eKey (<i>header</i>)	string	Unique key of the entire transaction. The length of the string is 50, e.g. "1232432eeer23"
putMenuRequest (*) ³ (<i>body</i>)	object	Unique key

Table 7 - Put Menu Request structure

Body:

<i>menu</i>	<i>identifier</i>	string				Unique Menu key. Example, Menu2	
	<i>price</i>	number(\$double)				Shows the Menu Price.	
	<i>Media</i>	MediaURL	string				Specifies audio/video url
		MediaDescription	string				Specifies audio/video description
		MediaCredit	string				Specifies audio/video credits
		MediaLicense	string				Licence code for audio/video use
		MediaLicenseURL	string				Audio/video licence URL
MediaType	string				Specifies if Audio or Video		

³ Required field



TDH – Expressions of public interest
(Catering) – Architecture

		MediaTitle	String			Specifies the title of the media
		MediaEndDate	String			Specifies the end of life of the media
		isExternal	string			Indicates whether it is an audio/video from external sources. Example YouTube
	<i>description</i>	string				Specifies Menu description. Example, fixed price menu Children
	<i>currency</i>	string				Specifies Price Currency
<i>section</i>	<i>item</i>		<i>price</i>	<i>string</i>		Specifies Article Price
			<i>name</i>	<i>string</i>		Specifies Article name. Example, Tonned Calf
			<i>description</i>	<i>string</i>		Specifies an Item Description. Example, Tonned Veal, Classic Recipe
			<i>currency</i>	<i>string</i>		Specifies Price Currency
		<i>Image</i>	<i>ImageURL</i>	<i>string</i>		Specifies Image Url
			<i>ImageDescription</i>	<i>string</i>		Specifies Image description



				<i>ImageCredit</i>	<i>string</i>	<i>Specifies Image Credits</i>
				<i>ImageLicense</i>	<i>string</i>	<i>Licence code for image use</i>
				<i>ImageLicenseURL</i>	<i>string</i>	<i>Url for image use</i>
				<i>ImageWidth</i>	<i>number(\$double)</i>	<i>Width of the image</i>
				<i>ImageHeight</i>	<i>number(\$double)</i>	<i>Height of the image</i>
				<i>ImageTitle</i>	<i>string</i>	<i>Image Title</i>
				<i>ImageEndDate</i>	<i>string</i>	<i>Image expiry date</i>
	<i>name</i>	<i>string</i>				<i>Name the section to which it belongs. Example, First course, Second course</i>
	<i>image</i>		<i>ImageURL</i>	<i>string</i>		<i>Url of the image</i>
			<i>ImageDescription</i>	<i>string</i>		<i>Image description</i>
			<i>ImageCredit</i>	<i>string</i>		<i>Image Credits</i>
			<i>ImageLicense</i>	<i>string</i>		<i>Licence code for image use</i>
			<i>ImageLicenseURL</i>	<i>string</i>		<i>Url for image use</i>
			<i>ImageWidth</i>	<i>number(\$double)</i>		<i>Width of the image</i>
			<i>imageHeight</i>	<i>number(\$double)</i>		<i>Height of the image</i>
			<i>ImageTitle</i>	<i>string</i>		<i>Image Title</i>
			<i>ImageEndDate</i>	<i>string</i>		<i>Image expiry date</i>
	<i>url</i>	<i>string</i>				<i>Name of Menu Url</i>

<i>destination/ D</i>	[string]					
<i>feature</i>	<i>id</i>	string		Additional field for future developments		
	<i>value</i>	string		Additional field for future developments		

Table 8 - Put Menu Body structure

5.1.2 Put Menu – Response

Code	Field	Type	Description
200	codiceEsito	Integer	Outcome of request processing. 1=> OK , 0 => KO . E.g. "1"
	id	string	String of size 50. It indicates the unique key of the TDH022 system that identifies the resource. E.g. "21396293821"
	message	string	String of size 50. IT represents the outcome of request processing. E.g. "Bad Request"
400	codiceEsito	string	Outcome code
500	codiceEsito	string	Outcome code

Table 9 - Put Menu Response structure

6 Delete Menu Interface

This web API will allow the user to interface with the TDH022 deleting the menu related to a specific selected destination.

The specifications for this API are given below:

- *Source*: Third Parties (Third Parties displaying content on the TDH)
- *Target*: AEM
- *Update type*: Synchronous (real-time content updating)
- *Trigger*: On call
- *Typology*: Create (new data stream creation)
- *Integration mode*: REST and SOAP
- *Methodology*: Delete

6.1 Delete Menu – Swagger

The swagger and its fields (with description) are given below in order to connect via API.

6.1.1 Delete Menu – Request

Parameters:

Name	Type	Description
reqTimestamp(<i>header</i>)	string	Timing at which the call was made, e.g. "1640019167"
source (<i>header</i>)	string	Source system. This field is unique and should be agreed with the TDH022, e.g."RegionePuglia". The length of the string is 50.
e2eKey (<i>header</i>)	string	Unique key of the entire transaction. The length of the string is 50, e.g. "1232432eeer23"
identifier(*) ⁴ (<i>path</i>)	string	Unique key

Table 10 - Delete Menu Request structure

6.1.2 Delete Menu – Response

Code	Field	Type	Description
200	codiceEsito	integer	Outcome of request processing. 1=> OK , 0 => KO . E.g. "1"
	id	string	String of size 50. It indicates the unique key of TDH022 system that identifies the resource. E.g. "21396293821"
	message	string	String of size 50. IT represents the outcome of request processing. E.g. "Bad Request"
400	codiceEsito	string	Outcome code
500	codiceEsito	string	Outcome code

Table 11 - Delete Menu Response structure

7 API to be exposed by Catering Partners

In order to interconnect with TDH, Catering Partners shall expose at least the following APIs:

- Dedicated API to retrieving any establishment within a given geographical area or related to a given address with a flag showing availability for online booking (e.g. getRestaurantList),
- Dedicated API to check tables availability of within the specific location (e.g. get Availability),
- Dedicated API to allow the booking of the previously selected table (e.g. put Reservation).

In addition to this, Partners undertake to make available data and statistics regarding successful ("show") and unsuccessful ("no show") bookings.

⁴ Required Field

Finally, if technological integration for the purposes of interoperability should take place via the supplier's widgets instead of the services listed in this document, this integration will not be mediated by the Middleware but will be managed directly between the front-end and the supplier.

7.1 SLA assumed volumes of the APIs exposed by Catering Partners side

The goal of this paragraph is sharing the assumed volumes regarding the API invocations exposed by Catering Partners. The following table shows the projections of volumes starting from an assumption of traffic generated towards the TDH:

ASSUMED HOURLY CALLS		ASSUMED TOTAL DAILY CALLS	
Average Calls	Peak (peak hours of the day)	Total average	Of which Peak (peak hours of the day)
3.600	9.000	86.400	72.000

Table 12 – Assumed volumes of API calls

Here is an explanation of the above table:

- The Average of hourly calls has been assumed considering 10% of the total hourly calls on TDH dedicated to Catering;
- The Peak of hourly calls was assumed by calculating 25% of the total hourly calls on TDH in the time slots 11-15 e 19-22;
- Total daily calls side assumes a peak of 72,000 calls in the two time bands defined above out of a total of 86,400 daily calls.