BDM Data Standard – Direct Service Offer

Version 1.0

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Document Version History

Version	Status	Date	Modified by	Change description	Section & line Ref	Changed from	Changed to	Effects of change
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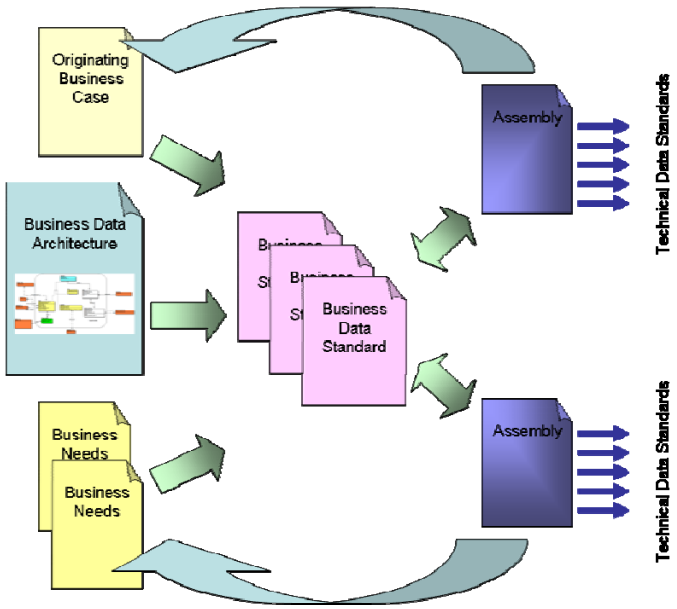
Introduction

This Business Data Standard has been designed to satisfy all education, skills and children's services (ESCS) business needs to exchange information about Direct Service Offers, and in particular applicable age ranges, prices and opening hours, in the context of the advertising of direct services and the provision of those services.

It describes data about a Direct Service (DS) Offer which is an offer that is made by a Stakeholder (in the role of a service provider) when marketing its services to potential service users (e.g. a nursery marketing to parents). A Direct Service Offer has a description of the service being offered and one or more offered prices (Direct Service Offer Pricepoints) each of which relates to a specific Stakeholder Period (i.e. a session). This recognises that there may be varied prices for a service at different times and under different circumstances. For example, childcare may cost more in the evening than during the day.

Currently there is only one DS Offer Pricepoint Criteria per DS Offer Pricepoint. The purpose of the criteria entity is to hold discrete attributes about an offer that may be embedded within the Offer Description. By holding them in the criteria entity, these attributes can then be managed separately. As more attributes about the offer are added that need to be managed discretely these will be added to the criteria and will create multiple criteria records for a Direct Service Offer Pricepoint.

This Business Data Standard has been defined in response to a business need captured in the ISB Business Case for Childcare Standards. In developing this standard, every effort has been made to ensure that it is capable of supporting all ESCS business needs for the same data. The Business Case may in fact give rise to a number of Business Data Standards, and the way that the standards are associated to meet the originating business need is shown via an "Assembly" document. The related documents are shown in the following diagram



This Business Data Standard shows how information relating to a Direct Service Offer is structured into entities and relationships according to the ESCS Business Data Architecture and enumerates and defines each information attribute in terms of:

- The relationships between entities in this standard and further entities defined in other standards
- The semantics, or meaning, of each entity and each attribute
- The data type, field length and construction rules for each attribute in an encoding-independent manner.
- Where the value of an attribute is to be defined by a list of permitted values (a "code list"), a reference to the relevant code list standard
- Where the standard relates to information defined by a standard from an external organisation (ISO, BSI, CEN etc) then this will also be noted.
- Any business rules (e.g. mandatory status) that are true for *every* business use of the standard.

ESCS ICT systems may conform to this ISB Business Data Standard, along with other related Business Data Standards by defining a conformant Technical Data Standard that specifies an encoding schema for data exchange and other implementation-specific details, for example it may indicate that within the scope of its use one or more attributes are Mandatory. Those that do conform can be assured that their data will be interchangeable with any other conformant systems.

Data Standard

Entity relationships

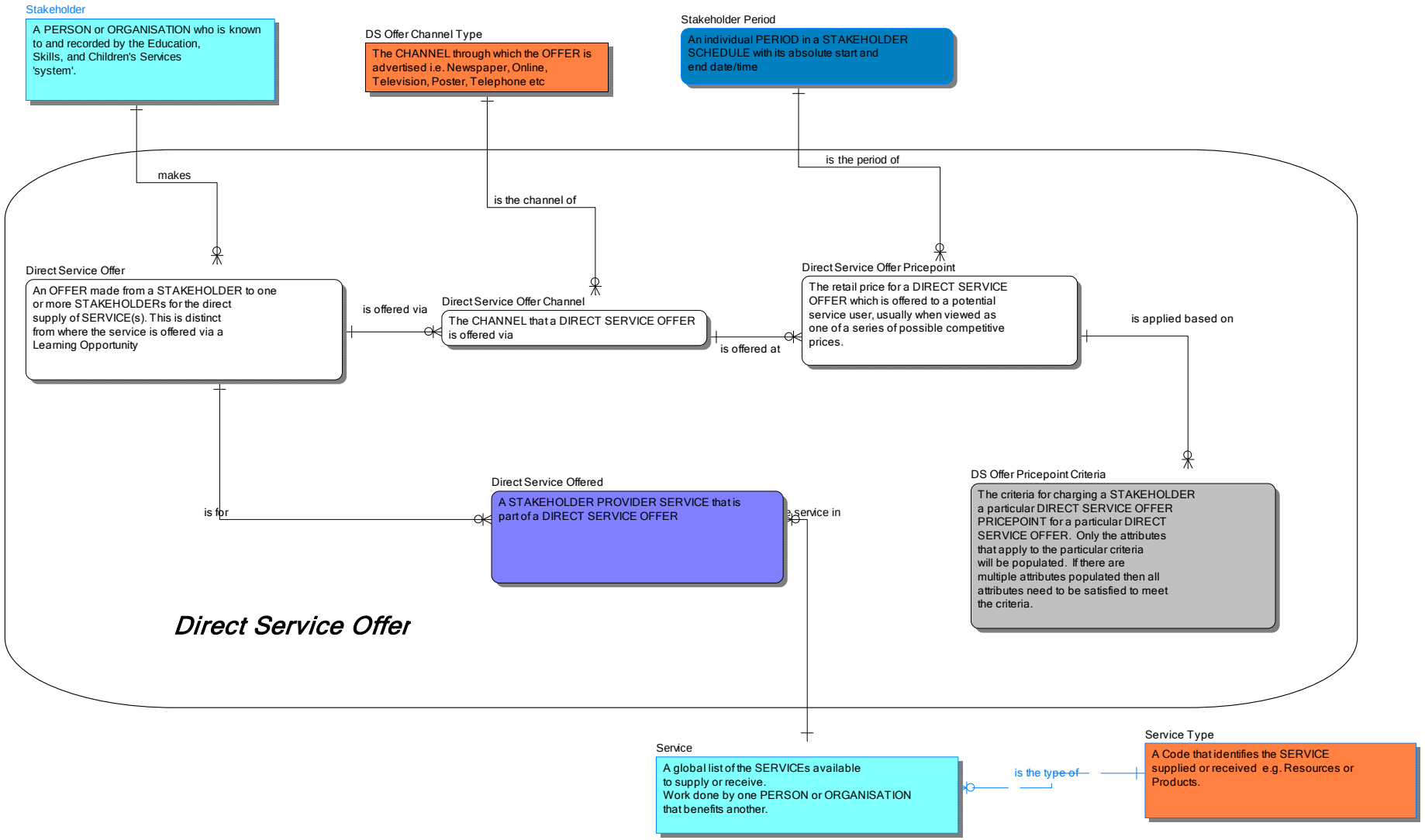
The following diagrams show the entities covered in this standard and their relationships to each other. The diagrams are:

- Entity Definition Model – A high level diagram extracted from the ESCS Business Data Architecture showing just the entities, their descriptions and the relationships between the entities.
- Attribute Model – A lower level diagram also extracted from the ESCS Business Data Architecture showing the entities and the names of their attributes. Entities in the Attribute Model are drawn as a box divided into two sections. The top section contains only attributes that form the primary key of the entity and the remaining attributes are placed in the bottom section.

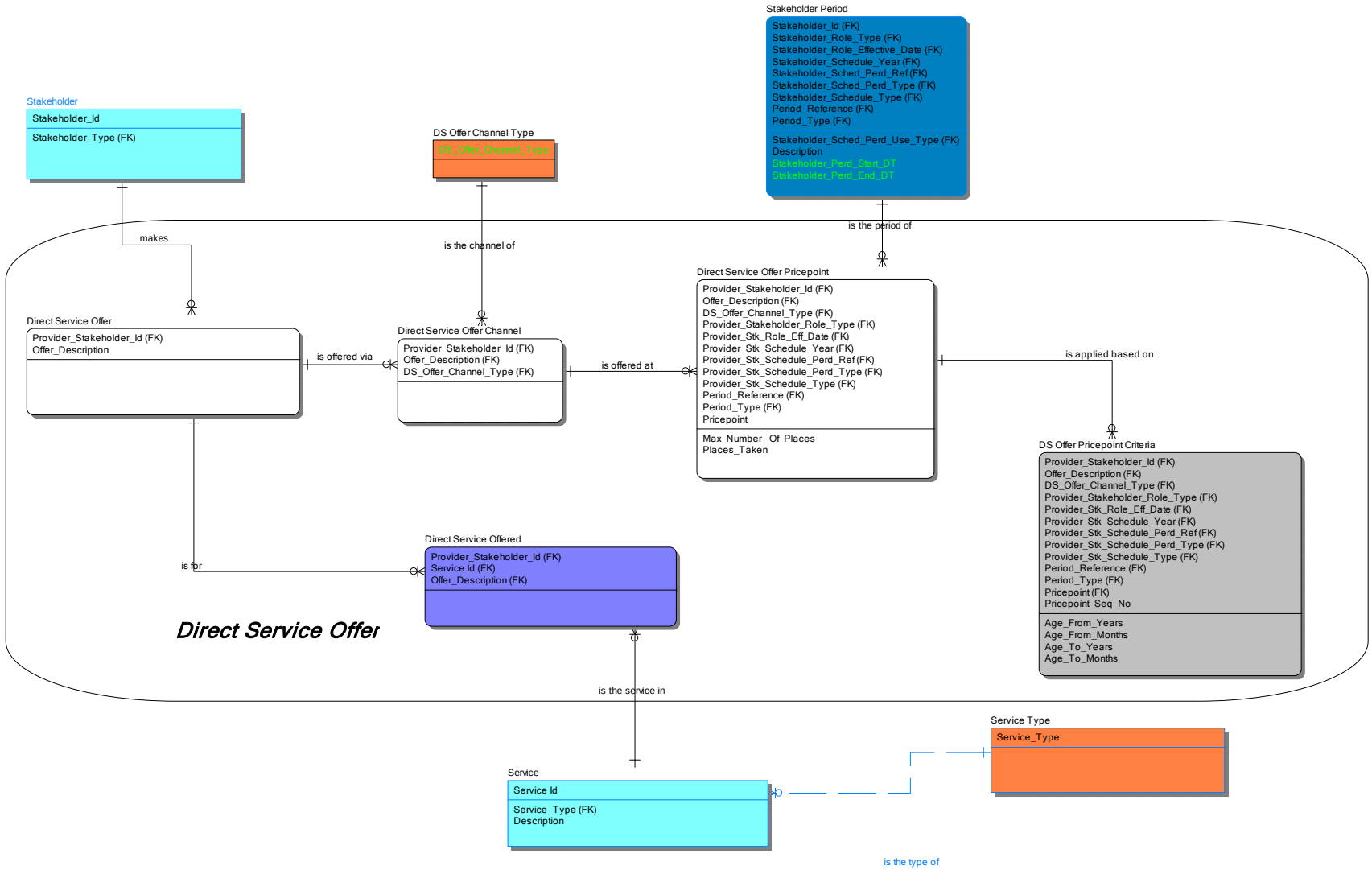
Diagram Notation

The notation used follows the Business Data Architecture Document notation (refer to ESCS Business Data Architecture document for further details). Only those entities within the boundary square are to be part of this particular data standard. Those entities outside of the boundary square are for context purposes only, or are separate reference data (orange coloured entities)

Entity Definition Model



Attribute Model



Data definitions

The following section further describes the entities and their attributes covered in this standard.

PK = Primary Key Attribute

FK =Foreign Key Attribute

M = Mandatory Attribute

Entity: Direct Service Offer

An OFFER from a STAKEHOLDER to one or more STAKEHOLDERs for the direct supply of SERVICE(s). This is distinct from where the service is offered via a Learning Opportunity.

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
Provider_Stakeholder_ID	A value that denotes and distinguishes the STAKEHOLDER	Y	Y	Y	Simple_String (1,32)	Stakeholder	Stakeholder_ID	
Offer_Description	The characteristics of the particular DIRECT SERVICE OFFER. This attribute is part of the primary key to avoid the need to create an arbitrary surrogate key.	Y	N	Y	Unicode_String			

Entity: Direct Service Offer Channel

The CHANNEL that a DIRECT SERVICE OFFER is offered via

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
Provider_Stakeholder_Id	A value that denotes and distinguishes the STAKEHOLDER	Y	Y	Y	Simple_String (1, 32)	Direct Service Offer	Provider_Stakeholder_Id	
Offer_Description	The characteristics of the particular DIRECT SERVICE OFFER. This attribute is part of the primary key to avoid the need to create an arbitrary surrogate key.	Y	Y	Y	Unicode_String	Direct Service Offer	Offer_Description	
DS_Offer_Channel_Type	The CHANNEL through which the OFFER is advertised i.e. Newspaper, Online, Television, Poster, Telephone etc	Y	Y	Y	Unicode_String			CL_DS_Offer_Channel_Type

Entity: Direct Service Offer Pricepoint

The retail price for a DIRECT SERVICE OFFER which is offered to a potential service user, usually when viewed as one of a series of possible competitive prices.

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
Provider_Stakeholder_ID	A value that denotes and distinguishes the STAKEHOLDER	Y	Y	Y	Simple_String (1, 32)	Direct Service Offer	Supplier_Stakeholder_ID	
Offer_Description	The characteristics of the particular DIRECT SERVICE OFFER	Y	Y	Y	Unicode_String	Direct Service Offer	Offer_Description	
DS_Offer_Channel_Type	The CHANNEL through which the OFFER is advertised i.e. Newspaper, Online, Television, Poster, Telephone etc	Y	Y	Y	Unicode_String			CL_DS_Offer_Channel_Type
Provider_Stakeholder_Role_Type	A Code that identifies a specific role of a STAKEHOLDER.e.g. LEARNER, LEARNING OPPORTUNITY PROVIDER. This attribute may appear prefixed with the role that is currently being undertaken. In this event the role_type is that specifically named role	Y	Y	Y	Simple_String (1, 50)	Stakeholder Period	Stakeholder_Role_Type	
Provider_Stk_Role_Eff_Date	The date from which the STAKEHOLDER is ready and approved (if necessary) to act in the specific role. This attribute	Y	Y	Y	Simple_Date_Time	Stakeholder Period	Stakeholder_Role_Effective_Date	

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
	may appear prefixed with a role type. In this event the effective date is that of the prefixed role type.							
Provider_Stk_Schedule_Year	The Year for which this STAKEHOLDER SCHEDULE is applicable. The type of year (Calendar, Academic, Financial) is identified by the STAKEHOLDER SCHEDULE TYPE	Y	Y	Y	Simple_Date_Time	Stakeholder Period	Stakeholder_Schedule_Year	
Provider_Stk_Schedule_Perd_Ref	A value that identifies the schedule period. e.g. Period 1, Week 1, Spring Term, etc.	Y	Y	Y	Simple_String (1,50)	Stakeholder Period	Stakeholder_Sched_Perd_Ref	
Provider_Stk_Schedule_Perd_Type	The code that specifies the duration of the period of time (e.g. year, term, week, day, period)	Y	Y	Y	Simple_String (1,50)	Stakeholder Period	Stakeholder_Schedule_Perd_Type	
Provider_Stk_Schedule_Type	A Code that identifies the category of significance of STAKEHOLDER SCHEDULE that may exist e.g., Academic Year Schedule, Financial Schedule	Y	Y	Y	Simple_String (1,50)	Stakeholder Period	Stakeholder_Schedule_Type	
Period_Reference	A code that identifies the schedule period. e.g.. Period 1, Week 1, Spring Term, etc	Y	Y	Y	Simple_String (1,50)	Stakeholder Period	Period_Reference	CL_Period
Period_Type	The code that identifies the type of period (e.g. year, term, week,	Y	Y	Y	Simple_String (1,50)	Stakeholder Period	Period_Type	CL_Period

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
	day, period)							
Pricepoint	The retail price of the DIRECT SERVICE OFFER PRICEPOINT usually when viewed as one of a series of possible competitive prices.	Y	N	Y	Decimal			
Max_Number_Of_Places	The maximum number of service provisions which can be offered concurrently for this DIRECT SERVICE OFFER PRICEPOINT. This is a PROVIDER decision, that is, it may differ from applicable constraints (e.g. the regulated maximum).	N	N	N	Integer			
Places_Taken	The number of committed service provisions for this DIRECT SERVICE OFFER PRICEPOINT.	N	N	N	Integer			

Entity: DS Offer Pricepoint Criteria

The criteria for charging a STAKEHOLDER a particular DIRECT SERVICE OFFER PRICEPOINT for a particular DIRECT SERVICE OFFER. Only the attributes that apply to the particular criteria will be populated. If there are multiple attributes populated then all attributes need to be satisfied to meet the criteria.

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
Stakeholder_ID	A value that denotes and distinguishes the STAKEHOLDER	Y	Y	Y	Simple_String (1, 32)	Direct Service Offer Pricepoint	Stakeholder_ID	
Offer_Description	The characteristics of the particular DIRECT SERVICE OFFER. This attribute is part of the primary key to avoid the need to create an arbitrary surrogate key.	Y	Y	Y	Unicode_String	Direct Service Offer Pricepoint	Offer_Description	
DS_Offer_Channel_Type	The CHANNEL through which the OFFER is advertised i.e. Newspaper, Online, Television, Poster, Telephone etc	Y	Y	Y	Unicode_String	Direct Service Offer Pricepoint	DS_Offer_Channel_Type	CL_DS_Offer_Channel_Type
Provider_Stakeholder_Role_Type	A Code that identifies a specific role of a STAKEHOLDER.e.g. LEARNER, LEARNING OPPORTUNITY PROVIDER. This attribute may appear prefixed with the role that is currently being undertaken. In this event the role_type is that specifically named role	Y	Y	Y	Simple_String (1, 50)	Direct Service Offer Pricepoint	Provider_Stakeholder_Role_Type	

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
Provider_Stk_Role_Eff_Date	The date from which the STAKEHOLDER is ready and approved (if necessary) to act in the specific role. This attribute may appear prefixed with a role type. In this event the effective date is that of the prefixed role type.	Y	Y	Y	Simple_Date_Time	Direct Service Offer Pricepoint	Provider_Stk_Role_Eff_Date	
Provider_Stk_Schedule_Year	The Year for which this STAKEHOLDER SCHEDULE is applicable. The type of year (Calendar, Academic, Financial) is identified by the STAKEHOLDER SCHEDULE TYPE	Y	Y	Y	Simple_Date_Time	Direct Service Offer Pricepoint	Provider_Stk_Schedule_Year	
Provider_Stk_Schedule_Perd_Ref	A value that identifies the schedule period. e.g. Period 1, Week 1, Spring Term, etc.	Y	Y	Y	Simple_String (1,50)	Direct Service Offer Pricepoint	Provider_Stk_Schedule_Perd_Ref	
Provider_Stk_Sched_Perd_Type	The code that specifies the duration of the period of time (e.g. year, term, week, day, period)	Y	Y	Y	Simple_String (1,50)	Direct Service Offer Pricepoint	Provider_Stk_Sched_Perd_Type	
Provider_Stk_Schedule_Type	A Code that identifies the category of significance of STAKEHOLDER SCHEDULE that may exist e.g., Academic Year Schedule, Financial Schedule	Y	Y	Y	Simple_String (1,50)	Direct Service Offer Pricepoint	Provider_Stk_Schedule_Type	

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
Period_Reference	A code that identifies the schedule period. e.g. Period 1, Week 1, Spring Term, etc	Y	Y	Y	Simple_String (1,50)	Direct Service Offer Pricepoint	Period_Reference	CL_Period
Period_Type	The code that identifies the type of period (e.g. year, term, week, day, period)	Y	Y	Y	Simple_String (1,50)	Direct Service Offer Pricepoint	Period_Type	CL_Period
Pricepoint	The retail price for a DIRECT SERVICE OFFER which is offered to a potential service user, usually when viewed as one of a series of possible competitive prices.	Y	Y	Y	Decimal	Direct Service Offer Pricepoint	Pricepoint	
Pricepoint_Seq_No	A sequence number indicating the DS OFFER PRICEPOINT CRITERIA's position in the list of DS OFFER PRICEPOINT CRITERIA for a particular DIRECT SERVICE OFFER PRICEPOINT.	Y	N	Y	Integer			
Age_From_Years	The years component of the minimum age that a PERSON is eligible to receive the service at this DIRECT SERVICE OFFER PRICEPOINT. Where a value exists in Age_From_Months then the Age_From_Years is in	N	N	N	Integer			

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
	addition to the Age_From_Months value. e.g. 1) age required is 3 years and 6 months. Age_From_Years = 3, Age_From_Months = 6. 2) If the age required is exactly 3 years then Age_From_Years = 3, Age_From_Months would be zero. 3) If the age required is 5 months then Age_From_Years = 0, Age_From_Months = 5							
Age_From_Months	The months component of the minimum age that a PERSON is eligible to receive the service at this DIRECT SERVICE OFFER PRICEPOINT. Where a value exists in Age_From_Years then the Age_From_Months is in addition to the Age_From_Years value. e.g. 1) age required is 3 years and 6 months. Age_From_Years = 3, Age_From_Months = 6.	N	N	N	Integer			

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
	2) If the age required is exactly 3 years then Age_From_Years = 3, Age_From_Months would be zero. 3) If the age required is 5 months then Age_From_Years = 0, Age_From_Months = 5							
Age_To_Years	The years component of the maximum age that a PERSON is eligible to receive the service at this DIRECT SERVICE OFFER PRICEPOINT Where a value exists in Age_To_Months then the Age_To_Years is in addition to the Age_To_Months value. e.g. 1) age required is 3 years and 6 months. Age_To_Years = 3, Age_To_Months = 6. 2) If the age required is exactly 3 years then Age_To_Years = 3, Age_To_Months would be zero. If the age required is 8	N	N	N	Integer			

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
	months then Age_To_Years = 0, Age_To_Months = 8							
Age_To_Months	The months component of the maximum age that a PERSON is eligible to receive the service at this DIRECT SERVICE OFFER PRICEPOINT. Where a value exists in Age_To_Years then the Age_To_Months is in addition to the Age_To_Years value. e.g. 1) age required is 3 years and 6 months. Age_To_Years = 3, Age_To_Month = 6. 2) If the age required is exactly 3 years then Age_To_Years = 3, Age_To_Months would be zero. If the age required is 5 months then Age_To_Years = 0, Age_To_Months = 5	N	N	N	Integer			

Entity: Direct Service Offered

A STAKEHOLDER PROVIDER SERVICE that is part of a DIRECT SERVICE OFFER.

Attribute Name	Attribute Description	PK	FK	M	Data Type	Parent Entity	Parent Attribute	Code List
Service_ID	A value that denotes and distinguishes the SERVICE	Y	Y	Y	Simple_String (1, 100)	Service	Service_ID	
Provider_Stakeholder_ID	A value that denotes and distinguishes the STAKEHOLDER	Y	Y	Y	Simple_String (1, 32)	Direct Service Offer	Provider_Stakeholder_ID	
Offer_Description	The characteristics of the particular DIRECT SERVICE OFFER. This attribute is part of the primary key to avoid the need to create an arbitrary surrogate key.	Y	Y	Y	Unicode_String	Direct Service Offer	Offer_Description	

Appendix A – Data Types

Note. Data Types are defined according to the conventions set out in the document “BDM Data Standard – Data Type Expressions”