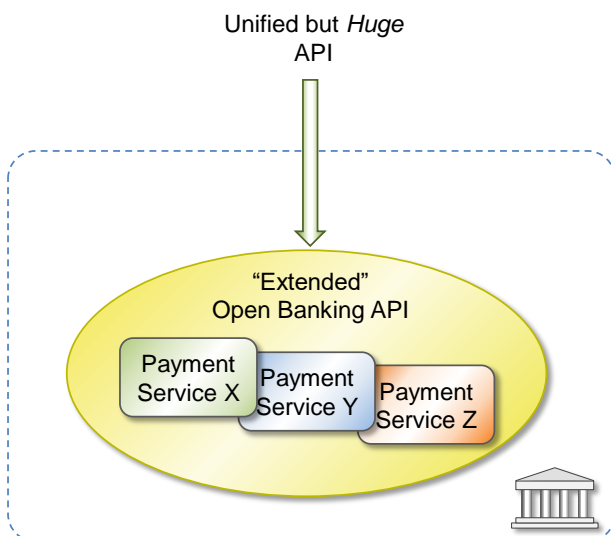


# Embedded SCA versus Direct Mode

Feature	Embedded SCA	Direct Mode	Comment
Multiple Development Options	✗	✓	<b>Direct Mode</b> permits <i>anybody</i> to develop a payment service including keeping the design <i>private</i> .
Platform Independence	✗	✓	Since <b>Direct Mode</b> services are <i>external</i> to Open Banking APIs, they may build on any suitable platform.
Easy to Standardize	✗	✓	<b>Direct Mode</b> only requires a <i>single</i> and fully standardized change to work, while <b>Embedded SCA</b> is a framework leaving 99% to payment service developers to define.
"Sandbox" Compatible	✗	✓	<b>Direct Mode</b> payment systems can be developed, demoed, and marketed based on "Sandbox" implementations.
"Cloud" Compatible	✗	✓	<b>Direct Mode</b> permits multiple deployment models, including running payment services in the cloud.
Service Isolation	✗	✓	<b>Direct Mode</b> makes it logical running payment services on dedicated hosts making maintenance and upgrades more manageable than in <i>monolithic</i> Open Banking API implementations.
Support for popular P2P payment systems like "Swish"	✗	✓	<b>Direct Mode</b> services are <i>unrestricted</i> with respect to flow, security, and processes.
Cost Efficient	✗	✓	<b>Direct Mode</b> makes it technically possible creating a <i>single implementation/code base supporting all Banks</i> . This is probably a prerequisite for third party vendor support.
Concerted Updates	✗	✓	Updating <b>Embedded SCA</b> applications should be <i>quite challenging</i> due to the diversity of Open Banking implementations.
EPI (European Payment Initiative) Compatible	?	✓	<b>Direct Mode</b> imposes no constraints.
Security / Authentication	✓	✓	In the <b>Direct Mode</b> security maintained by each of the connected services on their own. Each payment service must also authenticate to the Open Banking service.  In the <b>Embedded SCA</b> model most of the security is confined to implementations-specific solutions inside of the Open Banking framework.  <i>These methods should be comparable although it seems that it should be easier to audit software that is 1) used by more customers 2) is not a part of another framework.</i>

## Embedded SCA



## Direct Mode

