FlowView - Visual Mode

FlowView Navigator

Context Specific Toolbar

Global Toolbar

Property Panel

FlowScreen Navigator

FlowView Canvas

FlowView - Side by Side Mode

FlowView Navigator

Context Specific Toolbar

Global Toolbar

Property Panel

Text View Panel

FlowScreen Navigator

FlowView Canvas

Flow Editor
Design Specification
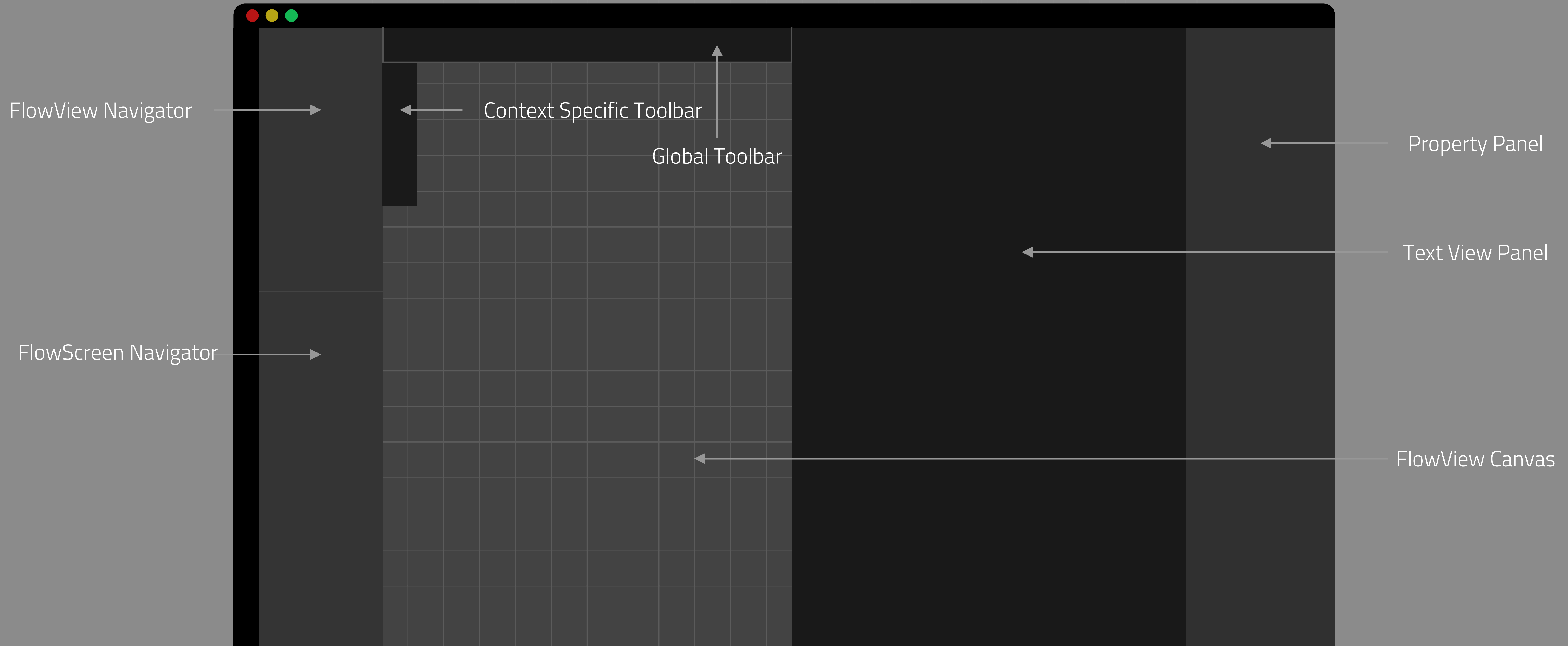
Navigator Outlines

FlowView Navigator

Flow Views

Flow 1
Flow 2
Flow 3   X
Flow 4
⊕ new flow

Close Button Popup

Flow 3   X

New Flow Hover

⊕ new flow

Delete Confirmation Popup

are you sure you want
to delete this file?

cancel   ok

New Flow Plus Hover

⊕ new flow

Name Flow Dialog

Name your flow view

cancel   ok

With Name

Name your flow view

MyFlowView

cancel   ok

Confirm New Flow

Name your flow view

MyFlowView

cancel   ok

FlowScreen Navigator

Flow Screens

Screen1.ui.qml
Screen2.ui.qml
Screen3.ui.qml
Screen4.ui.qml
⊕ new screen

Screen Item Hover

Screen1.ui.qml

Thumbnail Preview

New Flow Screen Hover

⊕ new flow screen

New Flow Screen Plus Hover

⊕ new flow screen

Thumbnail Preview

Flow Screens

Screen2.ui.qml
Screen3.ui.qml
Screen4.ui.qml

Name Flow Screen Dialog

Name your flow Screen

cancel   ok

With Name

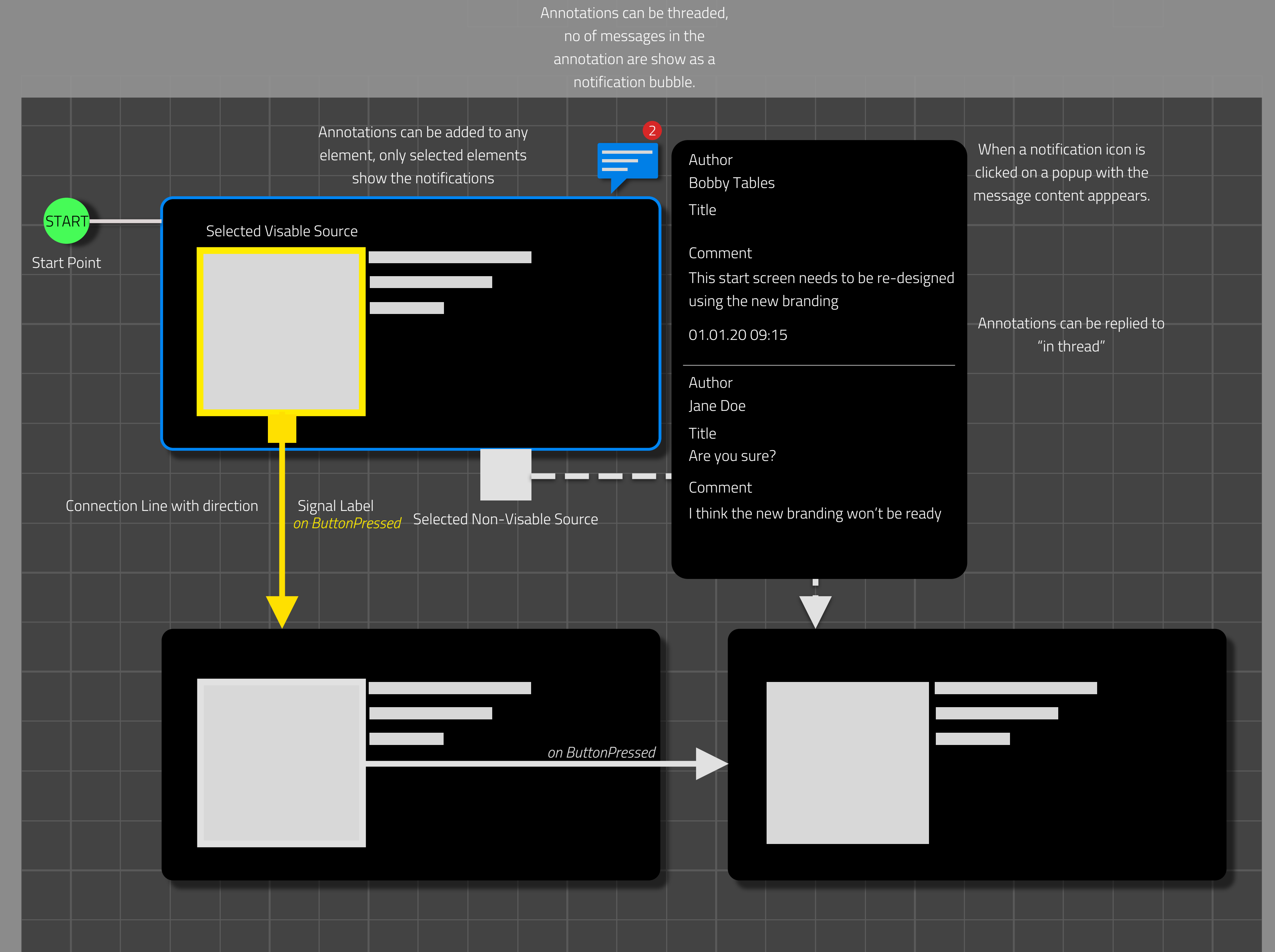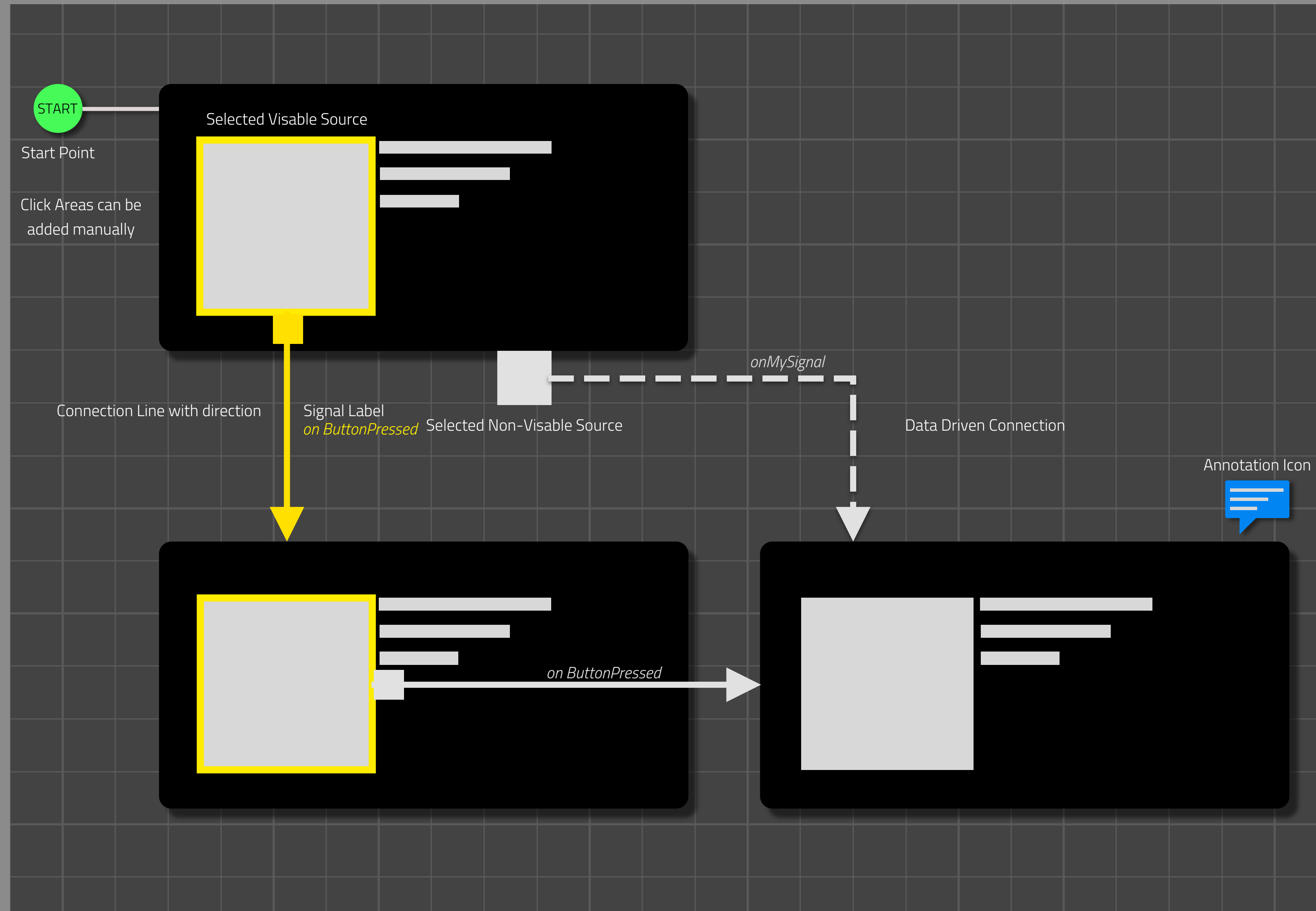Name your flow Screen

myFlowScreen

cancel   ok

Confirm New Flow Screen

Name your flow screen

myFlowScreen

cancel   ok

Navigator Outlines

Annotations can be threaded,
no of messages in the
annotation are show as a
notification bubble.

START

Start Point

Click Areas can be
added manually

Selected Visable Source

onMySignal

Annotations can be added to any
element, only selected elements
show the notifications

When a notification icon is
clicked on a popup with the
message content apppears.

Author
Bobby Tables
Title

Comment
This start screen needs to be re-designed
using the new branding

01.01.20 09:15

Author
Jane Doe
Title
Are you sure?

Comment
I think the new branding won't be ready

Annotations can be replied to
"in thread"

START

Start Point

Selected Visable Source

Connection Line with direction

Signal Label
on ButtonPressed

Selected Non-Visable Source

Data Driven Connection

Annotation Icon

Connection Line with direction

Signal Label
on ButtonPressed

Selected Non-Visable Source

on ButtonPressed

on ButtonPressed

Property Panels - Flow Screen

Flow Screen Properties

Type	
Type	FlowTransition
id	flowTransition1
Annotation	Add Annotation +

Flow Transition

∨ Type

Component	MyButton1 ∨
Signal	onClicked ∨
Target	MyFlowScreen2 ∨

∨ Flow Transition Settings

Transition Effect	Wipe ∨
Transition Duration (ms)	500
Easing Curve	Linear (no curve) ∨
Abortable	☐
Abort time (ms)	100
Acceleratable	☐
Accelerate time (ms)	100

Component

myFlowScreen1 ∨
myButton2
mySwitch2
mySwitch3

Signal

onClicked ∨
onReleased
onHover
onClicked

Target

myFlowScreen2 ∨
myFlowScreen3
myFlowScreen4
myFlowScreen5

Need to select a subcomponent
Then a signal from that component
If the connection line is drawn manually this
will be automatically selected.

Combined signal and effect properties are not possible
at the moment but could be a nice future goal.

Transition Effect

Wipe ∨
Fade
push from left
push from right

Transition Duration (ms)

onClicked ∨
onReleased
onHover
onClicked

Easing Curve

Linear (no curve) ∨
Ease in
Ease Out
Quadratic
Bounce
Add Custom Curve +

Custom Curve

Property Panels - Flow Screen

Flow Screen Properties

Type

Type	FlowTransition
id	flowTransition1
Annotation	Add Annotation +

Flow Transition

⌄ Type

Signal	myThing.onClicked ⌄
Target	MyFlowScreen2 ⌄

⌄ Flow Transition Settings

Transition Effect	Wipe ⌄
Transition Duration (ms)	500
Easing Curve	Linear (no curve) ⌄
Abortable	▢
Abort time (ms)	100
Acceleratable	▢
Accelerate time (ms)	100

Component

myFlowScreen1 ⌄
myButton2
mySwitch2
mySwitch3

Signal

onClicked ⌄
onReleased
onHover
onClicked

All signals are analyzed
from nested compoents

Target

myFlowScreen2 ⌄
myFlowScreen3
myFlowScreen4
myFlowScreen5

Transition Effect

Wipe ⌄
Fade
push from left
push from right

Transition Duration (ms)

onClicked ⌄
onReleased
onHover
onClicked

Easing Curve

Linear (no curve) ⌄
Ease in
Ease Out
Quadratic
Bounce
Add Custom Curve   +

Custom Curve

Property Panels - Toolbars

Context Ribbon Toolbar

Draw Click Area

Zoom In

Zoom Out

Frame All

Connect

Starting Point

Annotate

Broadcast Node

Global Toolbar

Flow Mode Icon

Create FlowScreen icon

Clicking the icon puts
the user in flow mode

Converts ui.qml file into
FlowScreen

Draw Click Area

In order to match the expectations of other design tools it is important to be able to see where a signal is triggered from. In practice this is a button on a UI screen. Due to the nature of componetisation in design studio it is not assumed a button will be either A) a top level item of a ui file (it may be nested many components deep) or B) All button signals will lead to a direct UI change, (it may well be a button sends a signal to the backend and the backend sends another signal to the UI.)

In essence this means we need to collect all possible signals from the screen and it may not be that signals have any visual representation in the screen that we can automatically highlight . We can however offer a way to draw this highlight and connect it to a user interaction on the screen, simulating the effect of having the flow starting from a highlighted part of the UI.

Zoom In

Pretty obvious, zoom in to the flow scene.
If the tool is selected, holding the command / alt key should flip the tool from zoom in to zoom out. Also zoom can remain with a shortcut on the mouse wheel + alt / command keys.

Connect

Pretty obvious, zoom in to the flow scene.
If the tool is selected, holding the command / alt key should flip the tool from zoom in to zoom out. Also zoom can remain with a shortcut on the mouse wheel + alt / command keys.

Zoom Out

Pretty obvious, zoom out from the flow scene.
If the tool is selected, holding the command / alt key should flip the tool from zoom out to zoom in. Also zoom can remain with a shortcut on the mouse wheel + alt / command keys.

Starting Point

A Flag that sets where a flow starts from, by default the first screen you add is the default starting point. Can be moved via the context toolbar, context menu (right click) on the screen in the flow or also maybe by dragging the start node in the flow view itself.

Frame All

Clicking this icon should frame the whole flow graph within the UI view. (note: it's not really a tool as such, just an icon that performs an action).

Annotate

You can add annotations to each element in the flow graph, both the flowScreens andFlowTransitions. Annotations can be added via the property editor, context menu (right click on the element) or using the tool in the context toolbar.

Broadcast Node

You can add a special broadcast node when a screen can appear from any other screen. Works together with white and blacklists.

Flow mode - Project Wizards
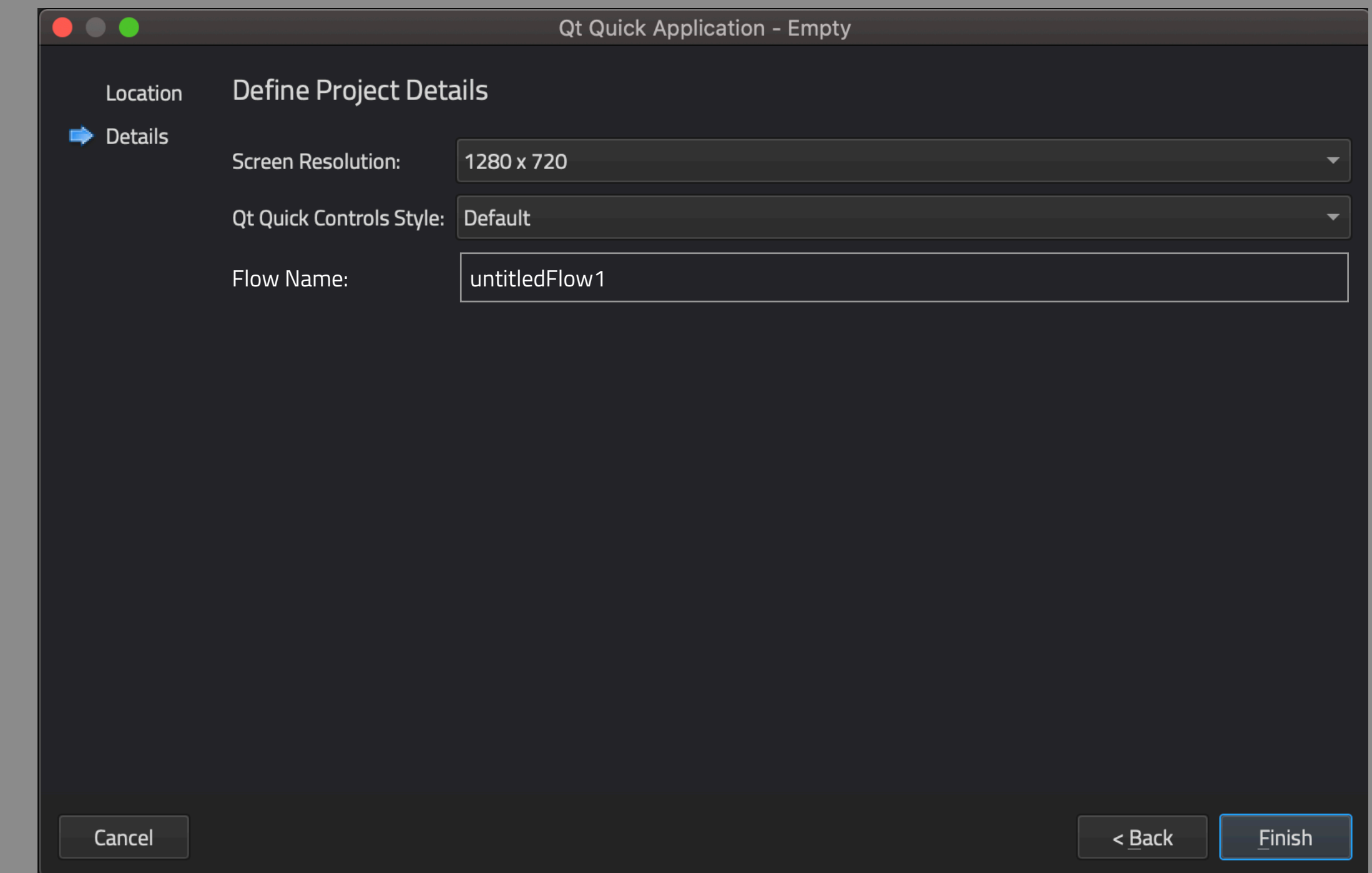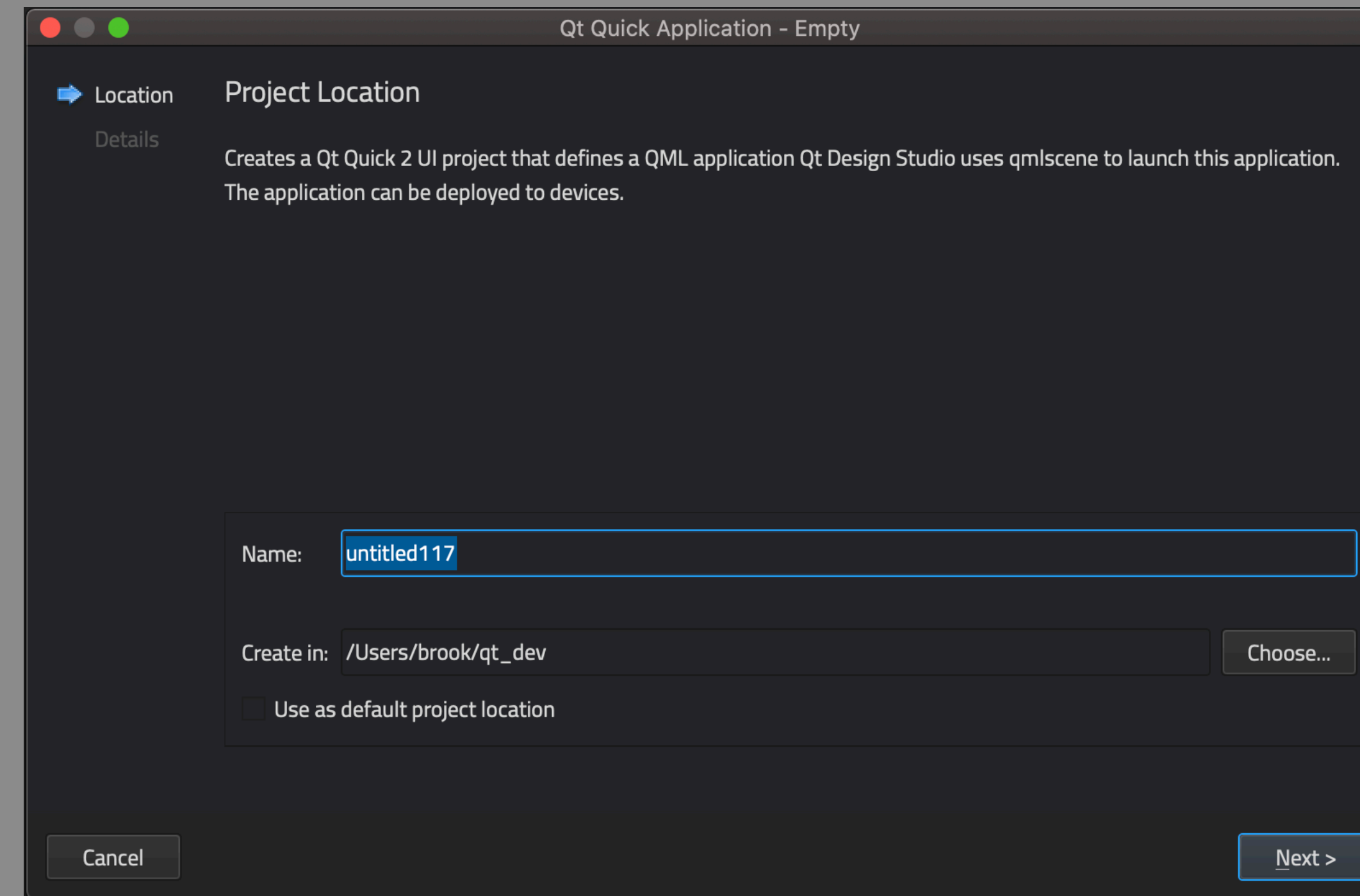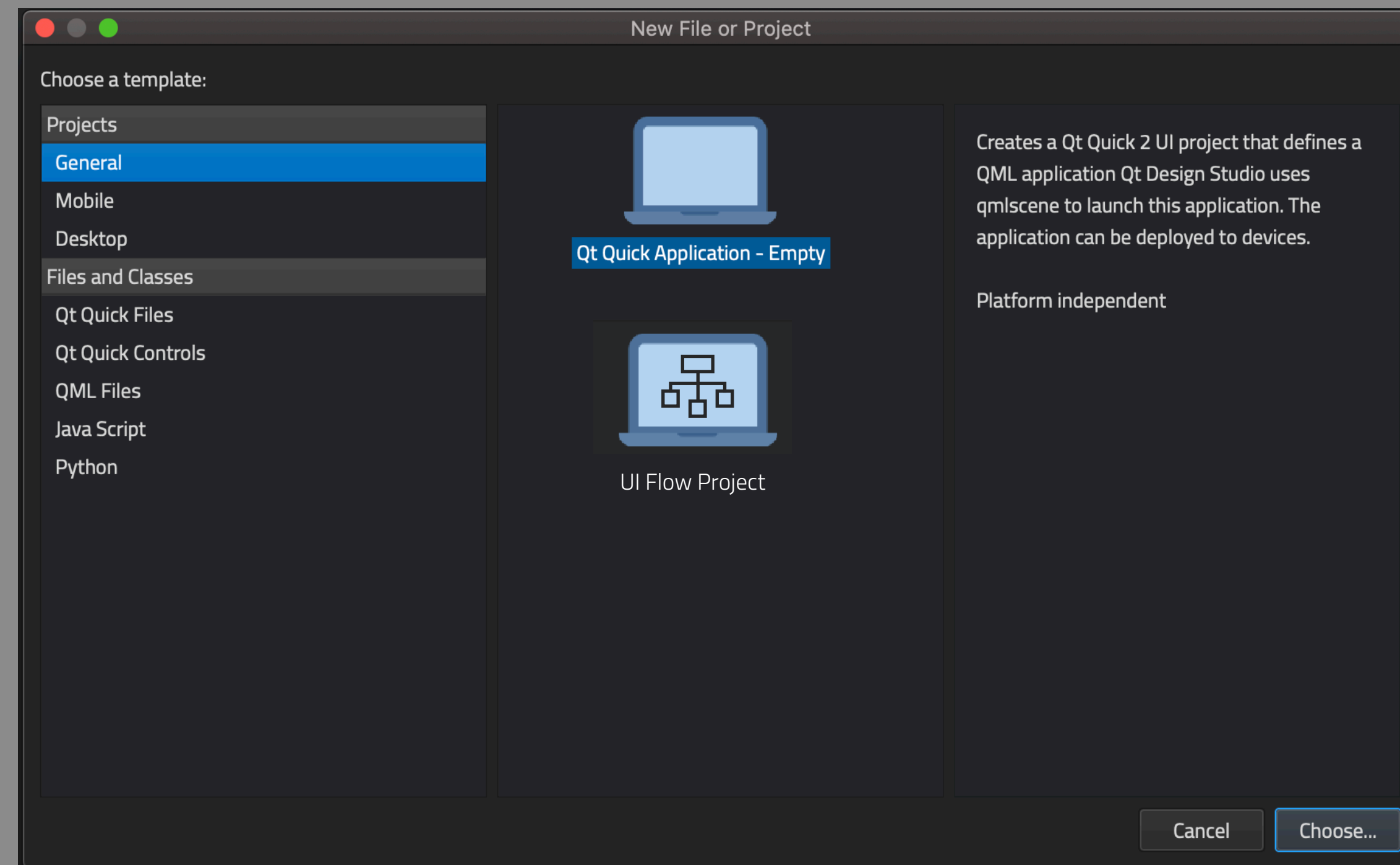
If a flow project is selected from the wizard then you automatically go into the flow mode. You need a flowScreen added by default and a way to add new screens from the flow mode interface.

Flow mode - Create FlowScreen from form editor

UI Flow Project

Project Navigator

form.ui.qml

form.ui.qml

form.ui.qml

form.ui.qml

Global Toolbar Icon
greyed out when already a fllow screen

File Navigator

RootItem
Child
Child
Child

create flow screen

create flow screen

create flow screen

Context Menus

Available from the screen in the form
editor, root item in the file navigator and
and ui.qml file in the project navigator

only available if not already a flow screen

Context Menus
greyed out when already a fllow screen

Flow mode - Create FlowScreen from wizards

UI Flow Project

Global Toolbar Icon

greyed out when already a fllow screen
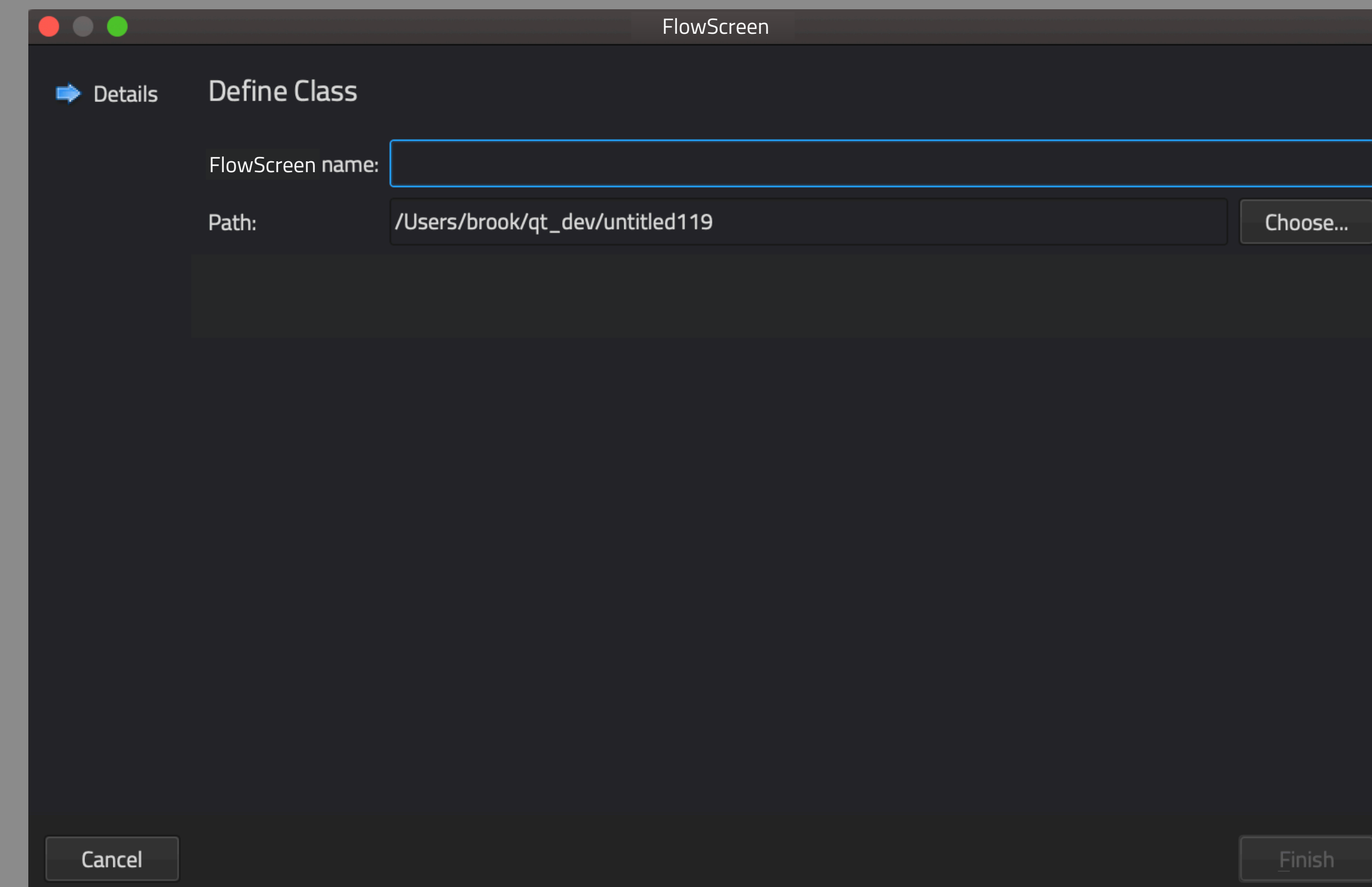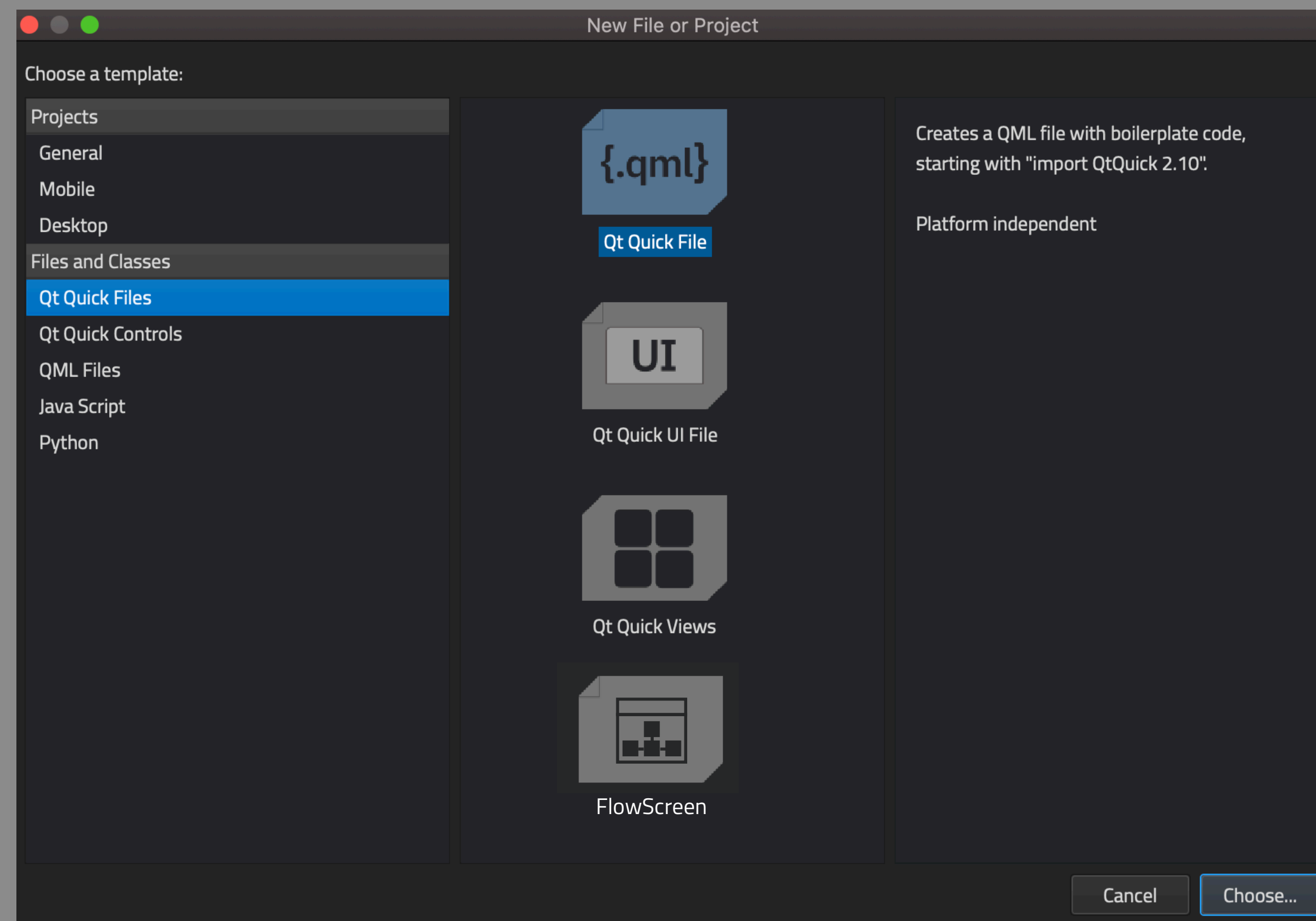
Flow mode - Many to Many Connections

UI Flow Project
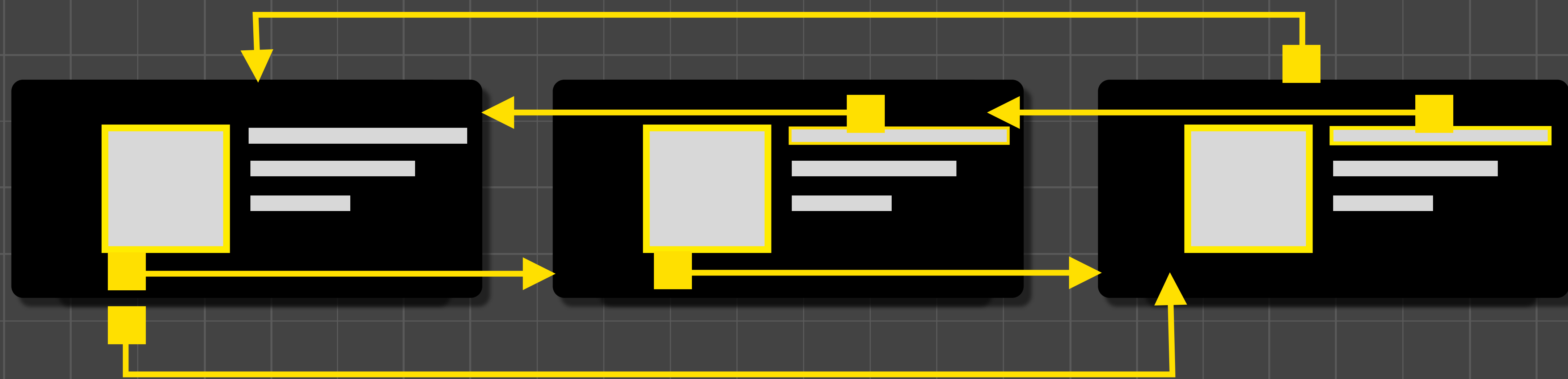
on ButtonPressed

Even a very simple flow can get confusing fast. If there are any conditional screens (screens that can come in from any screeen depending on a condition being met), drawing all the connection lines explicitly will give you an unusable graph very fast

FlowBroadcast Icon

Visual Aid only, is always attached to a transition item and uses the advanced properties of the transition.

In the case od conditional flows, or sreens with a N to Many appearance in the flow can be better handled with a special broadcast node with conditions, whitelist or blakclist.

Flow Screen Properties

Type

Type	FlowScreen
id	My Screen
Remove	Author - Bobby Tables
	Add Annotation +

Flow Transition | Advanced

∨ Type

Component	MyWarningScreen ∨
Signal	onBackendSignal ∨
From	☀ CurrentScreen ∨

Automatically selected when a transition is paired with a broadcast node.

In the case of these 1 to N transitions the target is derived from the combination of the current screen and a whitelist or blacklist. If the current active screen is not on the whitelist or explicitly on the blacklist when the signal is sent, the transition is not initiated. (should always be used where there is another screen that is allowed to be transitioned to instead.)

Flow Screen Properties

Type

Type	FlowScreen
id	My Screen
Remove	Author - Bobby Tables
	Add Annotation +

Flow Transition | **Advanced**

Whitelisted Files
Can appear in any of these files

Blacklisted Files
Cannot appear in any of these files

Some screens can come into any screen based on when a signal is triggered, in order to mode this we need to use whitelst and blacklists along with signals to trigger the transition. If both fields are blank then it can come into any screen. If there is any screen in the whitelist field it can only come into those sceens and if there's any screen in the blacklist it come into any screen except those.

Flow mode - Car Dash Example
Still over-simplifiied from what the real app would be

Something equally complex on this side too

Full Console Display

Tachometer Gauge

Navigation View

Music Player
SwipeArea

Music Library
SwipeArea

Music Store
SwipeArea

Music Settings
SwipeArea

onPress
onPress
onPress

onSwipeLeft
onSwipeRight
onClick
onClick
onClick
onClick

onSwipeLeft
onSwipeRight

onSwipeLeft
onSwipeRight
onPress

onClick
onClick
onClick

search
buy
buy
cancel
ok

200
200
200

Whitelisted Files
Can appear in any of these files

*all

Engine Warning

Can come into any screen

Blacklisted Files
Cannot appear in any of these files

engineWarning.ui.qml

Incoming Call

Can come into any screen except the engine warning

Flow Screen Properties

Type

Type	FlowScreen
id	My Screen
Remove	Author - Bobby Tables

Add Annotation +

Flow Transition | Advanced

Type

Component	MyWarningScreen
Signal	onBackendSignal
From	CurrentScreen
Target	EngineWarning

In the case of these 1 to N transitions the target is derived from the combination of the current screen and a whitelist or blacklist. If the current active screen is not on the whitelist or explicitly on the blacklist when the signal is sent, the transition is not initiated. (should always be used where there is another screen that is allowed to be transitioned to instead.)

Flow Screen Properties

Type

Type	FlowScreen
id	My Screen
Remove	Author - Bobby Tables

Add Annotation +
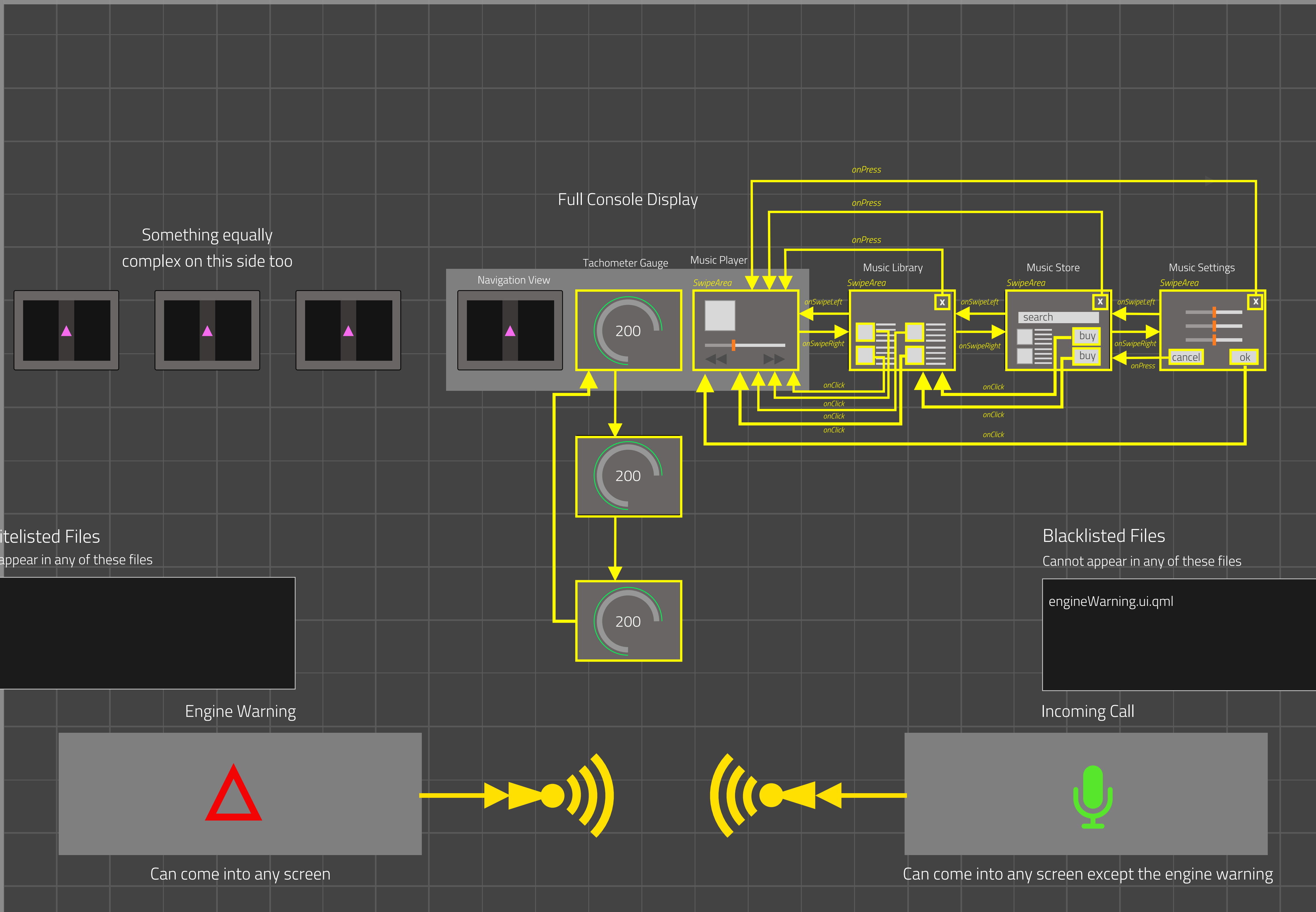
Flow Transition | **Advanced**

Whitelisted Files
Can appear in any of these files

Blacklisted Files
Cannot appear in any of these files

Some screens can come into any screen based on when a signal is triggered, in order to mode this we need to use whitelst and blacklists along with signals to trigger the transition. If both fields are blank then it can come into any screen. If there is any screen in the whitelist field it can only come into those sceens and if there's any screen in the blacklist it come into any screen except those.

Flow mode - Merge Arrows
Still over-simplifiied from what the real app would be

Something equally
complex on this side too

Full Console Display

Tachometer Gauge   Music Player

Navigation View

200

200

200

Music Library   Music Store   Music Settings

SwipeArea   *SwipeArea*   *SwipeArea*

onPress

onPress

onPress

onSwipeLeft   *onSwipeLeft*   *onSwipeLeft*
onSwipeRight   *onSwipeRight*   *onPress*

search   buy
buy

cancel   ok

onClick
onClick   *onClick*
onClick   *onClick*
onClick   *onClick*

Can multiple inputs be
merged into 1 arrow?

Whitelisted Files
Can appear in any of these files

*all

Blacklisted Files
Cannot appear in any of these files

engineWarning.ui.qml

Engine Warning

Incoming Call

Can come into any screen

Can come into any screen except the engine warning

Flow Screen Properties

Type

Type	FlowScreen
id	My Screen
Remove	Author - Bobby Tables
	Add Annotation +

Flow Transition   Advanced

Type

Component	MyWarningScreen
Signal	onBackendSignal
From	CurrentScreen
Target	EngineWarning

In the case of these 1 to N transitions the target
is derived from the combination of the current
screen and a whitelist or blacklist. If the current
active screen is not on the whitelist or explicitly
on the blacklist when the signal is sent, the
transition is not intitiated. (should always be
used where there is another screen that is
allowed to be transitioned to instead.)

Flow Screen Properties

Type

Type	FlowScreen
id	My Screen
Remove	Author - Bobby Tables
	Add Annotation +

Flow Transition   **Advanced**

Whitelisted Files
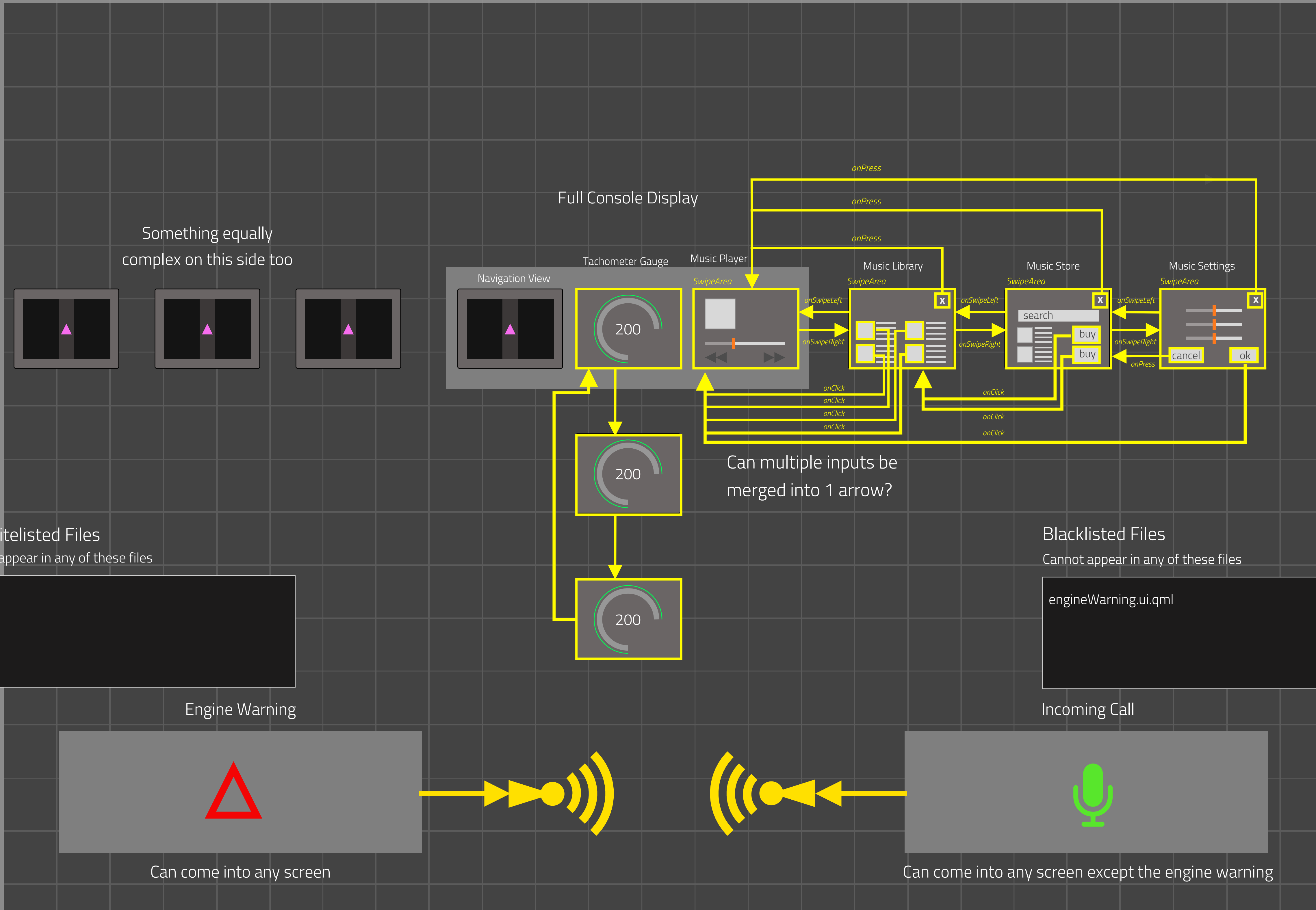Can appear in any of these files

Blacklisted Files
Cannot appear in any of these files

Some screens can come into any screen based
on when a signal is triggered, in order to mode
this we need to use whitelist and blacklists
along with signals to trigger the transition. If
both fields are blank then it can come into any
screen. If there is any screen in the whitelist
field it can only come into those sceens and if
there's any screen in the blacklist it come
into any screen except those.

Flow Editor
Design Specification

Flow mode - Merge Dots on Connections
Still over-simplifiied from what the real app would be

Something equally
complex on this side too

Full Console Display

Navigation View

Tachometer Gauge

Music Player

200

200

200

Music Library
SwipeArea

Music Store
SwipeArea

Music Settings
SwipeArea

onPress

onPress

onPress

onSwipeLeft

onSwipeLeft

onSwipeLeft

onSwipeRight

onSwipeRight

onPress

search

buy

buy

cancel

ok

onClick
onClick
onClick
onClick

onClick

onClick

onClick

Can multiple inputs be
merged into 1 arrow?

Whitelisted Files
Can appear in any of these files

*all

Blacklisted Files
Cannot appear in any of these files

engineWarning.ui.qml

Engine Warning

Can come into any screen

Incoming Call

Can come into any screen except the engine warning

Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Remove	Author - Bobby Tables
	Add Annotation +

Flow Transition | Advanced

Type

Component	MyWarningScreen ⌄
Signal	onBackendSignal ⌄
From	CurrentScreen ⌄
Target	EngineWarning ⌄

In the case of these 1 to N transitions the target is derived from the combination of the current screen and a whitelist or blacklist. If the current active screen is not on the whitelist or explicitly on the blacklist when the signal is sent, the transition is not intitiated. (should always be used where there is another screen that is allowed to be transitioned to instead.)

Flow Screen Properties

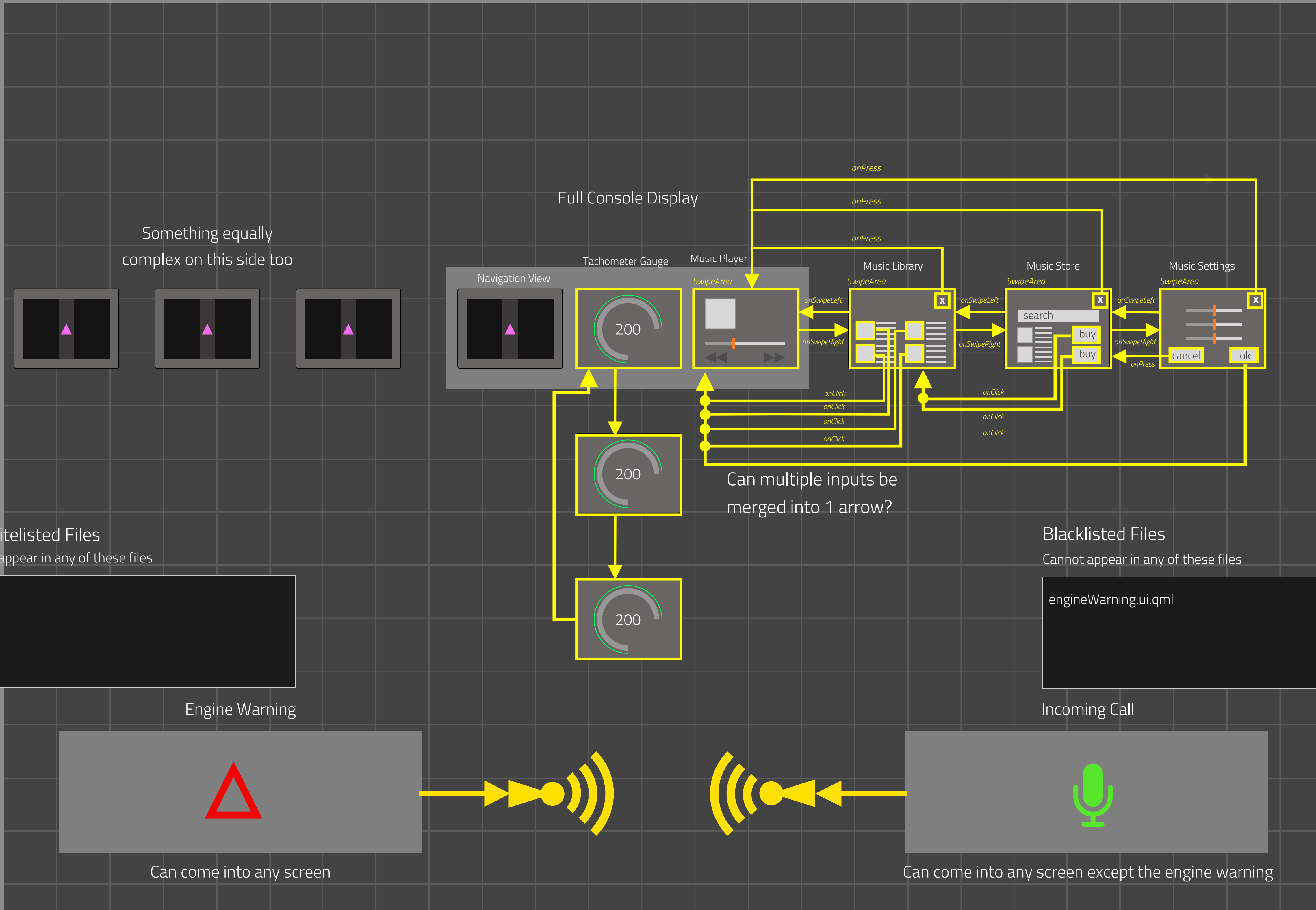| Type	
Type	FlowScreen
id	My Screen
Remove	Author - Bobby Tables
	Add Annotation +

Flow Transition | **Advanced**

Whitelisted Files
Can appear in any of these files

Blacklisted Files
Cannot appear in any of these files

Some screens can come into any screen based on when a signal is triggered, in order to mode this we need to use whitelst and blacklists along with signals to trigger the transition. If both fields are blank then it can come into any screen. If there is any screen in the whitelist field it can only come into those sceens and if there's any screen in the blacklist it come into any screen except those.

Flow mode -User Customisable Connections
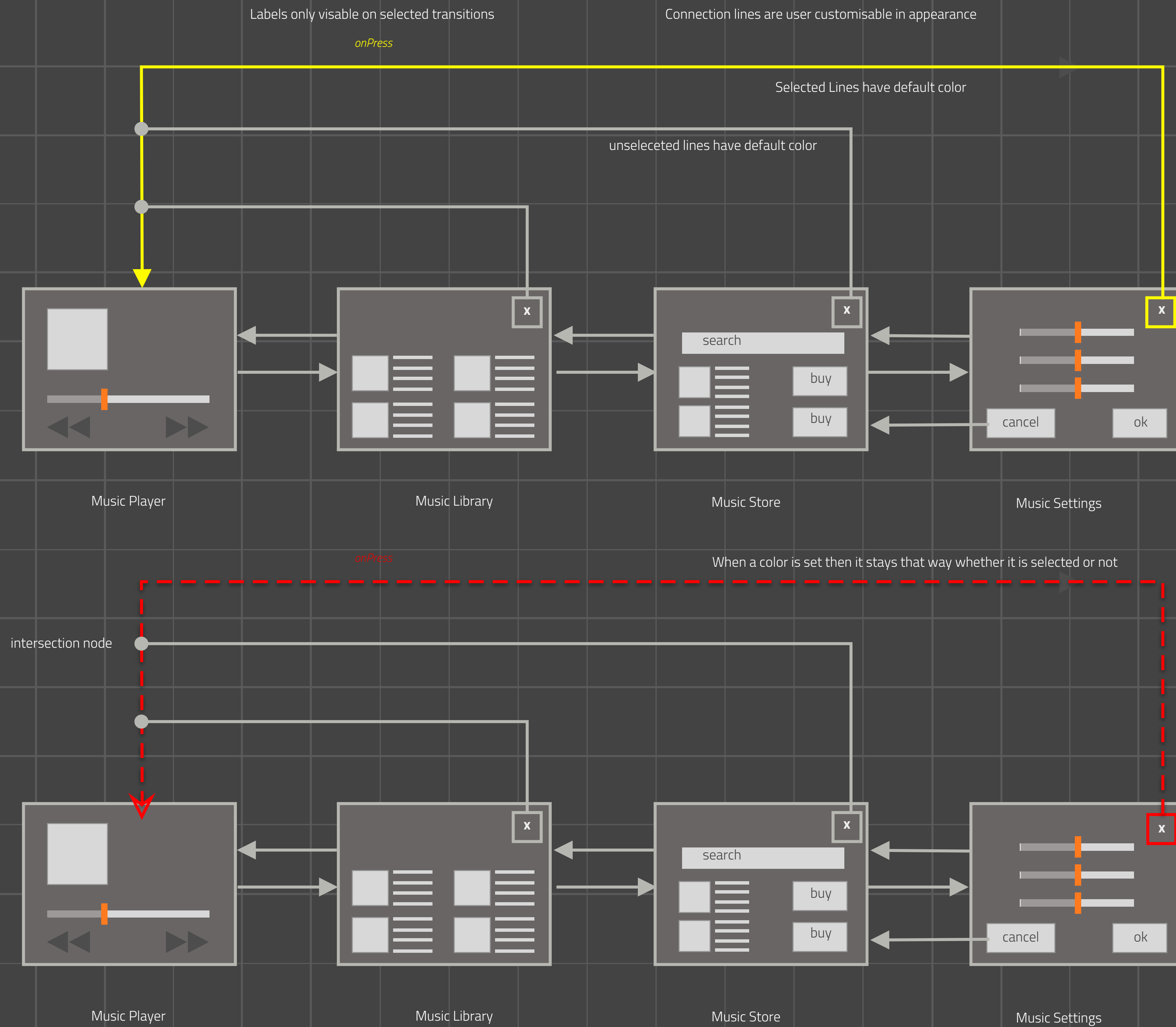
Labels only visable on selected transitions

onPress

Connection lines are user customisable in appearance

Selected Lines have default color

unseleceted lines have default color

Music Player

Music Library

search
buy
buy

Music Store

cancel   ok

Music Settings

When a color is set then it stays that way whether it is selected or not

intersection node

Music Player

search
buy
buy

Music Library

Music Store

cancel   ok

Music Settings

Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Flow Effect	Advanced

Effect Settings

Transition Effect	Wipe Left
Transition Duration	500
Easing Curve	none (linear)

Connection Appearance

Line Width	3px
Line Colour	
Opacity	100 %
Dash Type	Solid
Arrow Style	▶
Line Break Point	
Horizontal / Vertical	H

Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Flow Effect	Advanced

Effect Settings

Transition Effect	Wipe Left
Transition Duration	500
Easing Curve	none (linear)

Connection Appearance

Line Width	3px
Line Colour	
Opacity	100 %
Dash Type	Dot
Arrow Style	≫
Line Break Point	
Horizontal / Vertical	H

Flow mode - User Customisable Connections

Making Action Areas configurable allows the user to decdie if a
signal comes from a user interaction or from a backend signal

1

2

search

buy

buy
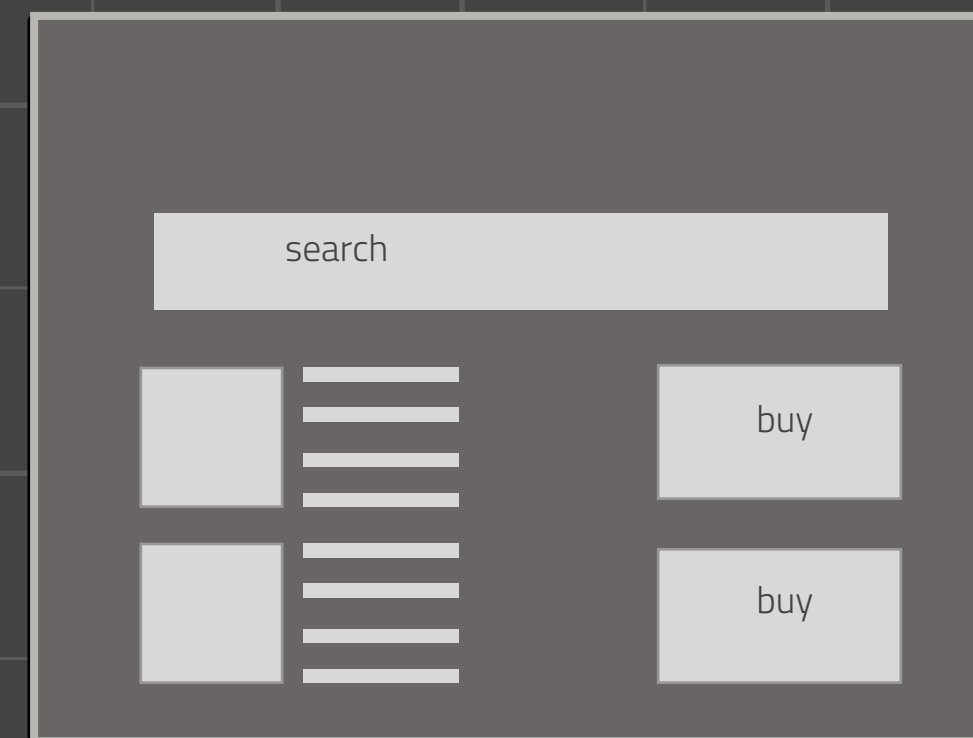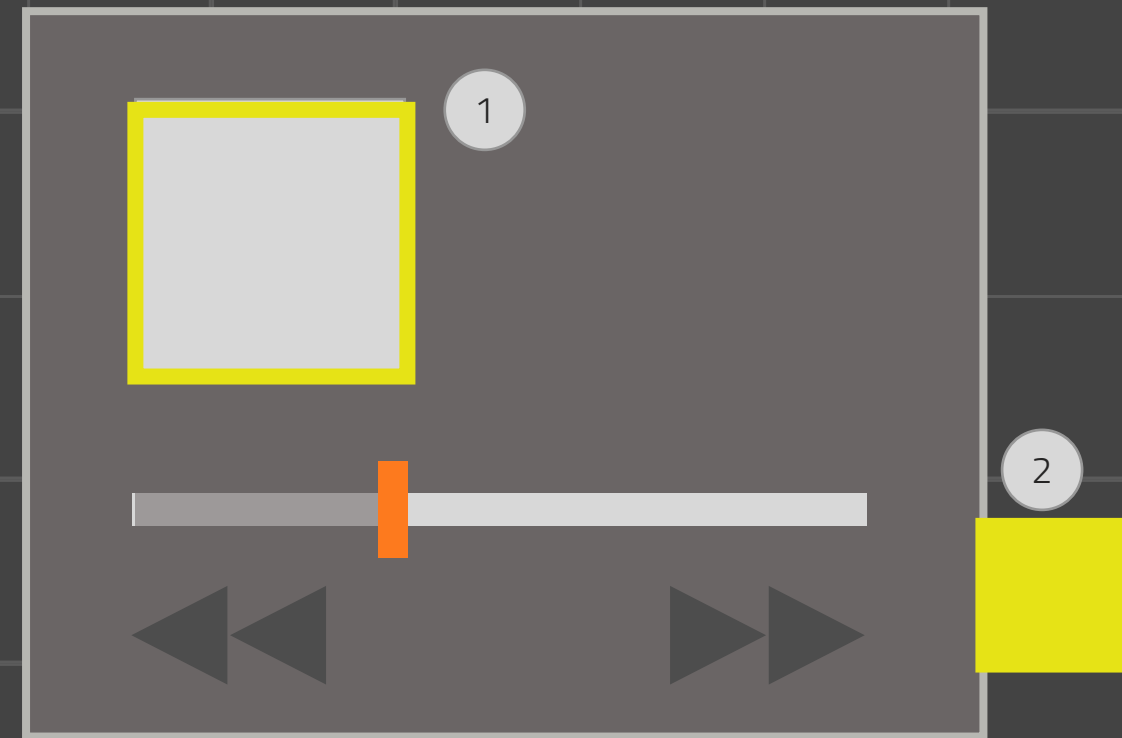
Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Action Area	Advanced

1 ∨ Action Area

Trigger event	On Click ∨
Component	MyButton ∨
Signal	onClick ∨
Target	∨

∨ Area Appearance

Fill Color	
Stroke Color	
Stroke Width	3px ↕
Opacity	100 % ↕
Stroke Type	Solid ∨

Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Flow Effect	Advanced

2 ∨ Action Area

Trigger event	None ∨
Component	MyHiddenComp ∨
Signal	backendSignal ∨
Target	∨

∨ Area Appearance

Fill Color	
Stroke Color	
Stroke Width	3px ↕
Opacity	100 % ↕
Stroke Type	Solid ∨

Flow mode - User Customisable Connections

Making Action Areas configurable allows the user to decdie if a signal comes from a user interaction or from a backend signal

Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Action Area	Advanced

Action Area

Trigger event	On Click
Component	MyButton
Signal	onClick
Target	screenTwo

Area Appearance

Fill Color	
Stroke Color	
Stroke Width	3px
Opacity	100 %
Stroke Type	Solid

Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Action Area	Advanced

Action Area

Trigger event	None
Component	MyHiddenComp
Signal	backendSignal
Target	screenThree

Area Appearance

Fill Color	
Stroke Color	
Stroke Width	3px
Opacity	100 %
Stroke Type	Solid

Flow mode Transition Effects - Expanded

Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations
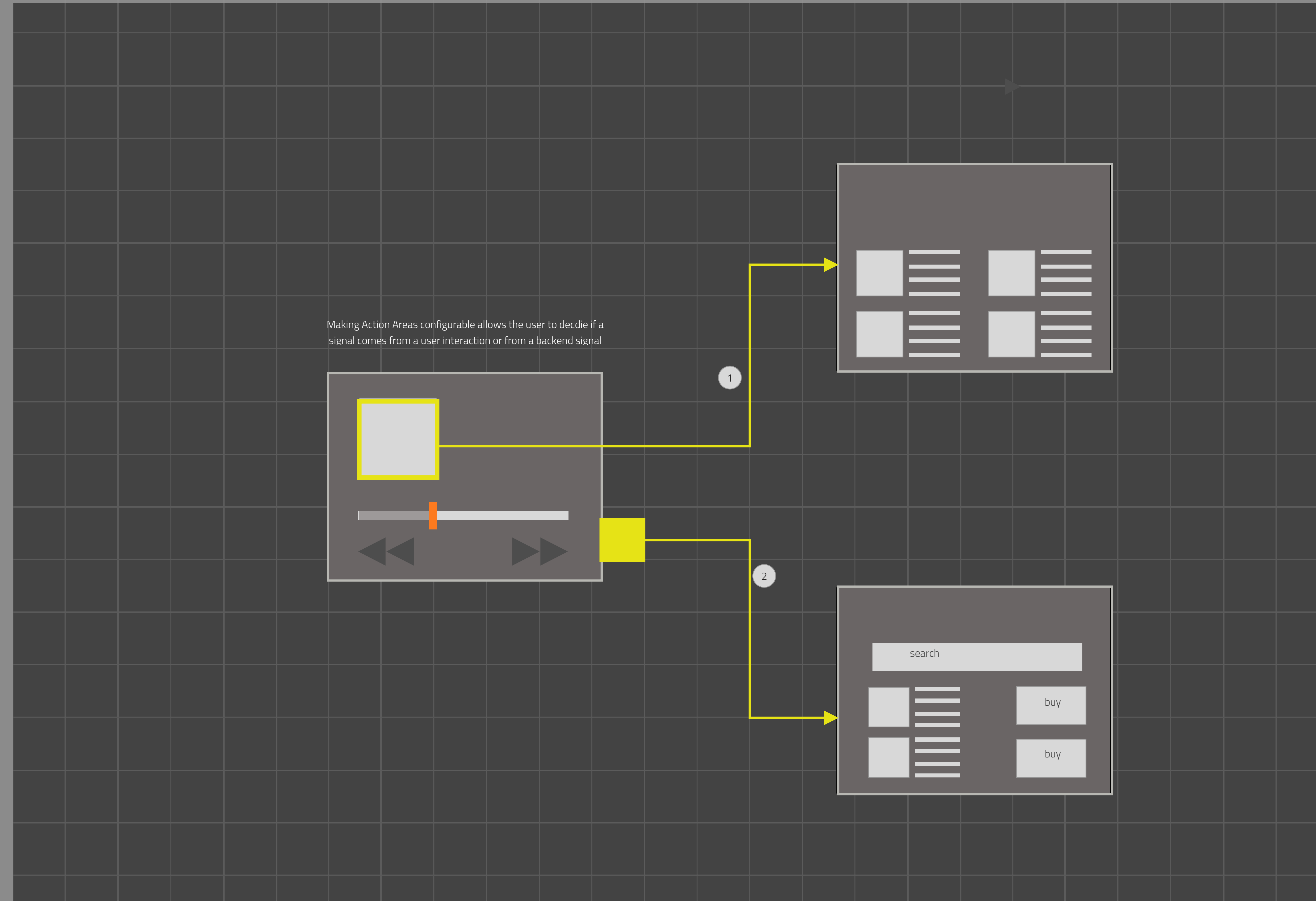
Transition | Advanced

∨ Transition Effect

Transition Effect	Wipe Iris In
Transition Duration (ms)	500
Easing Curve	Linear
Abortable	
Abort time (ms)	100
Acceleratable	
Accelerate time (ms)	100

> Transition Appearance

Flow Screen Properties

Type	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Transition | Advanced

∨ Transition Effect Advanced

progress	⚙	0

A useful property for bindings but should be hidden from the main property panel.

Making Action Areas configurable allows the user to decdie if a signal comes from a user interaction or from a backend signal

search

buy

buy

Flow mode –Decision Nodes

A node where decisions are made about which path to take.

onPress
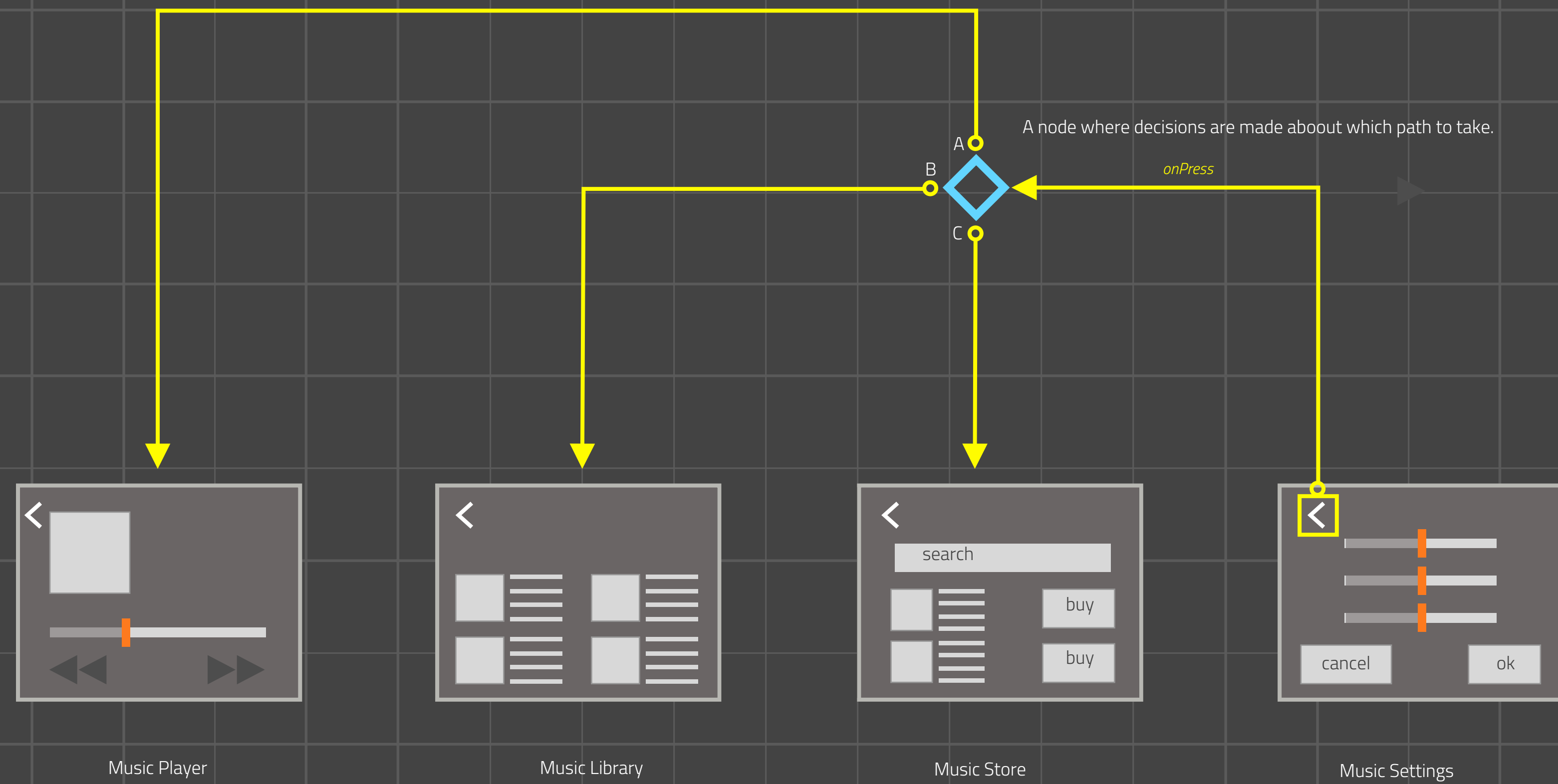
Simulate the input, needed for customeer cases

Music Player

Music Library

search

buy

buy

Music Store

cancel   ok

Music Settings

Flow Screen Properties

Type

Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Flow Decision   Advanced

∨ Decision Node

Simulate input ☑
(Generate button for each pathway)

Conditional Expression

∨ Connection Appearance

Size	10px
Line Colour	
Opacity	100 %
Dash Type	Solid

Flow Screen Properties

Type

Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Flow Decision   Advanced

∨ Decision Node

Simulate input ☐
(Generate button for each pathway)

Conditional Expression
(Generate condition field for each pathway)

Exit A	if backendValue (< 10)
Exit B	if backendValue (> 10 && < 20)
Exit C	if backendValue(> 20)

∨ Connection Appearance

Size	10px
Line Colour	
Opacity	100 %
Dash Type	Solid

Flow mode -Decision Nodes and simulation in live preview

Live Preview starts with the flagged start screen

Live Preview

Option A

Option B

Option C

Music Library

Music Store

Music Settings
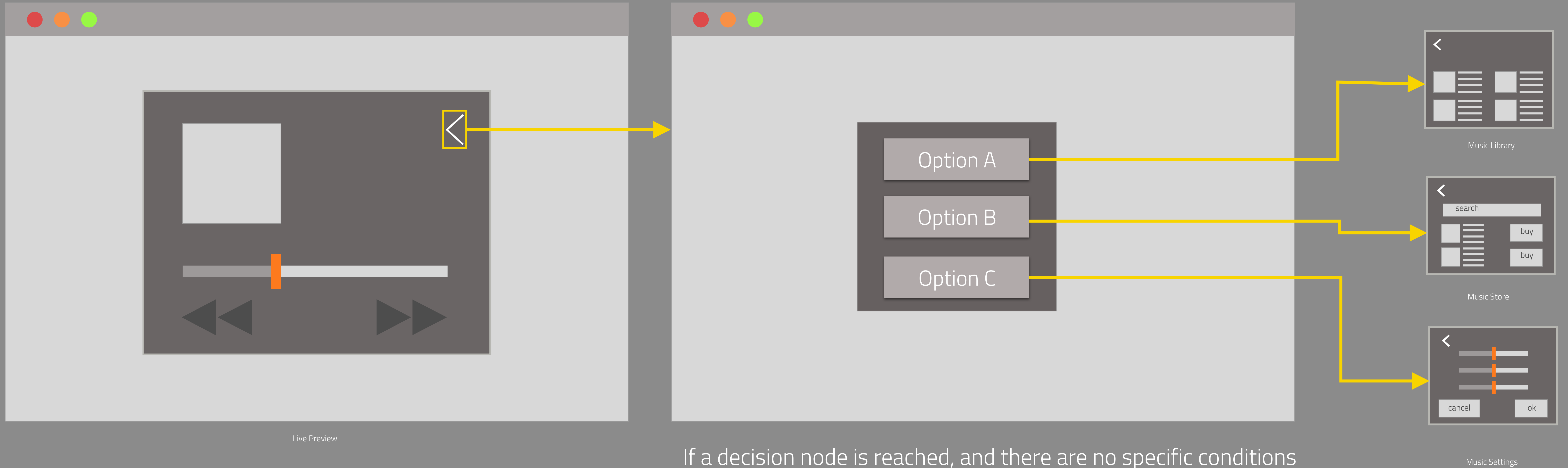
If a decision node is reached, and there are no specific conditions for each pathway (the simulate input option flag is ticked) A simple button list is generated and presented to the user.

Flow mode –Decision Nodes

Back butons are such a common design pattern we should have a standard solution for them

onPress

onPress

onPress

onPress

search

buy

buy

cancel   ok

Music Player

Music Library

Music Store

Music Settings

Flow Screen Properties

Type
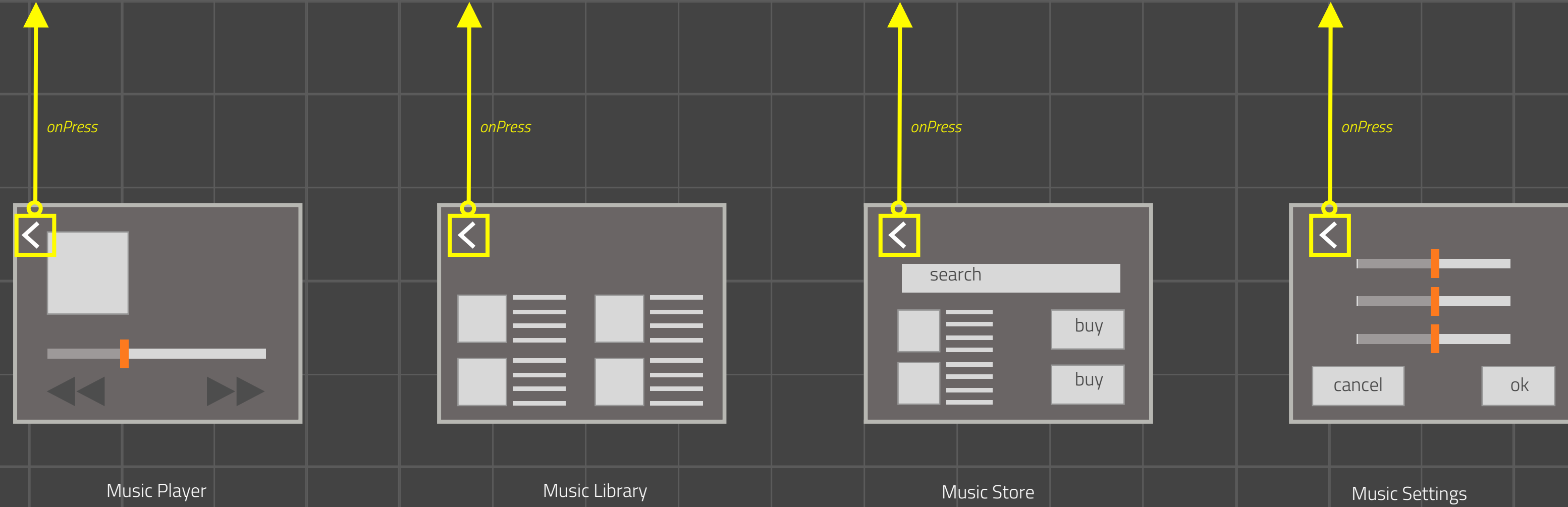
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Flow Broadcast	Advanced

⌄ Broadcast Node

Component	myBackButton	⌄
Signal	onClicked	⌄
From	CurrentScreen	⌄
Target	lastPageVisited	⌄

Should be a default target for broadcast nodes

⌄ Node Appearance

Fill Colour	
Opacity	100 %

Flow Screen Properties

Type

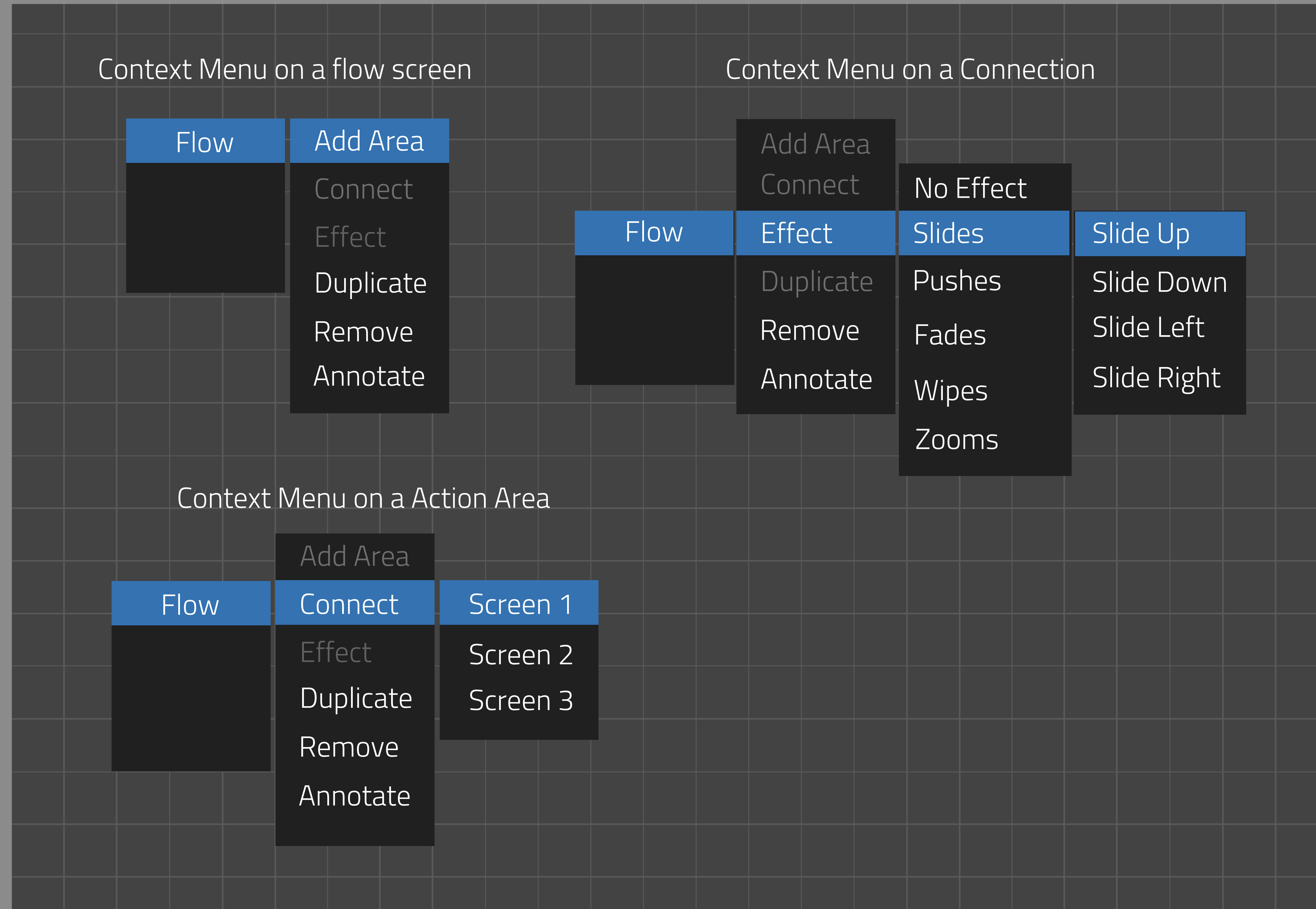|	
Type	FlowScreen
id	My Screen
Annotations	Launch Annotations

Flow Broadcast	Advanced

⌄ Broadcast Rules

Whitelisted Files
Can appear in any of these files

* all

Blacklisted Files
Cannot appear in any of these files

Flow mode – Nested Context Menus

Context Menu on a flow screen

Flow	Add Area
	Connect
	Effect
	Duplicate
	Remove
	Annotate

Context Menu on a Connection

	Add Area	
	Connect	No Effect
Flow	Effect	Slides	Slide Up
	Duplicate	Pushes	Slide Down
	Remove	Fades	Slide Left
	Annotate	Wipes	Slide Right
		Zooms	

Context Menu on a Action Area

	Add Area	
Flow	Connect	Screen 1
	Effect	Screen 2
	Duplicate	Screen 3
	Remove	
	Annotate	

Flow mode -Types of Transition Effects

No Effect
Slides · Slide Up
Pushes · Slide Down
Fades · Slide Left
Wipes · Slide Right
Zooms

No Effect
Slides
Pushes · Push Up
Fades · Push Down
Wipes · Push Left
Zooms · Push Right

No Effect
Slides
Pushes
Fades · Fade In
Wipes · Fade Out
Zooms · Dissolve

No Effect
Slides
Pushes
Fades
Wipes · Iris In
Zooms · Iris Out
· Clock Wipe

No Effect
Slides
Pushes
Fades
Wipes
Zooms · Zoom In
· Zoom Out

Flow Editor
Design Specification

Flow mode -Exporting Flows as PDF