Value Transformation

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Operators

- concatMap
- concatMapTo
- defaultIfEmpty
- endWith
- startWith
- exhaustMap
- expand
- map
- mapTo
- scan
- mergeScan
- pluck
- reduce
- switchMap/flatMap
- mergeMapTo
- switchMapTo
- materialize
- dematerialize

concatMap

Map values to provided function/Observable

Emits all values

Sequential

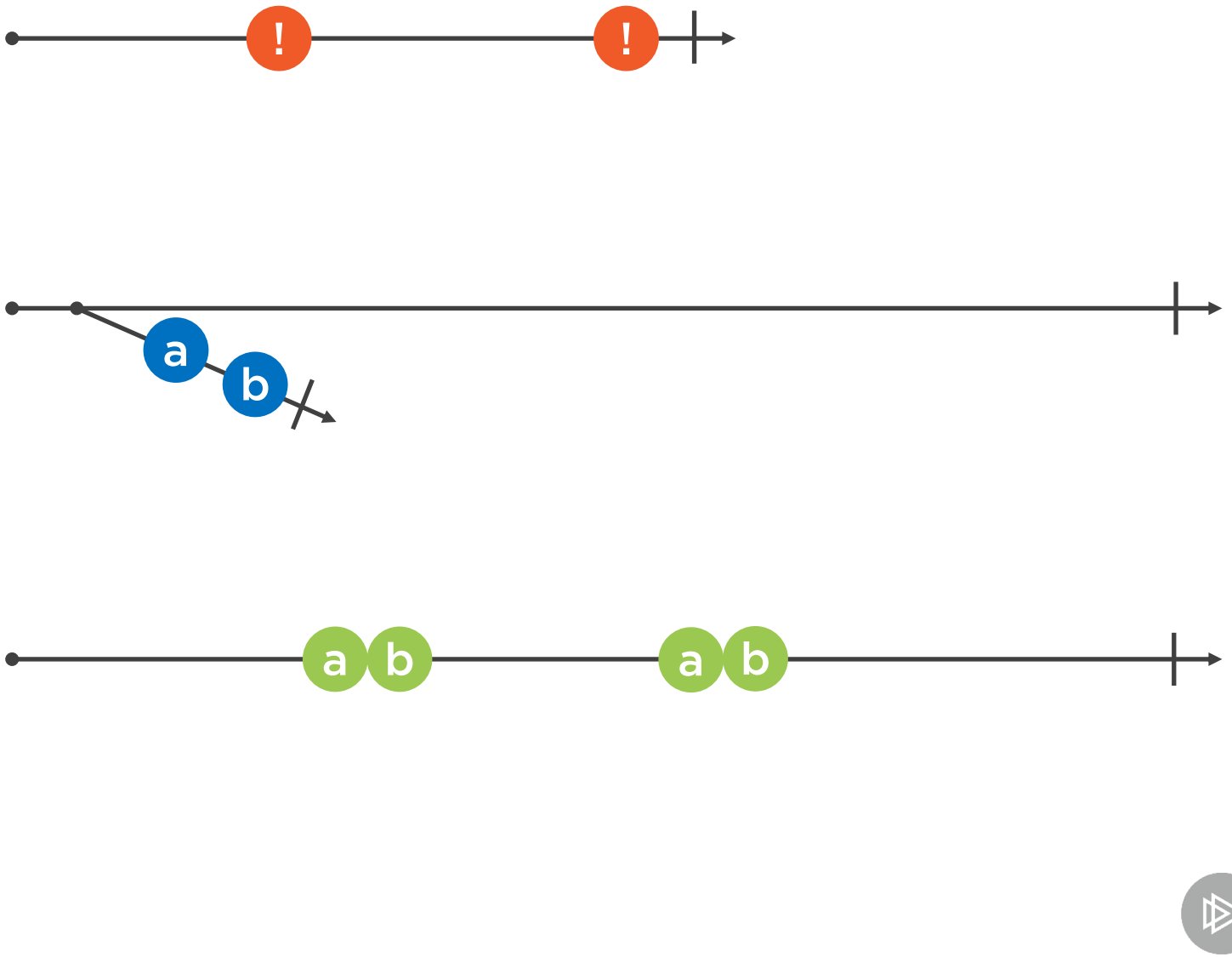

```
concatMap(x => [x, 3 * x])
```

concatMapTo

Source as signal

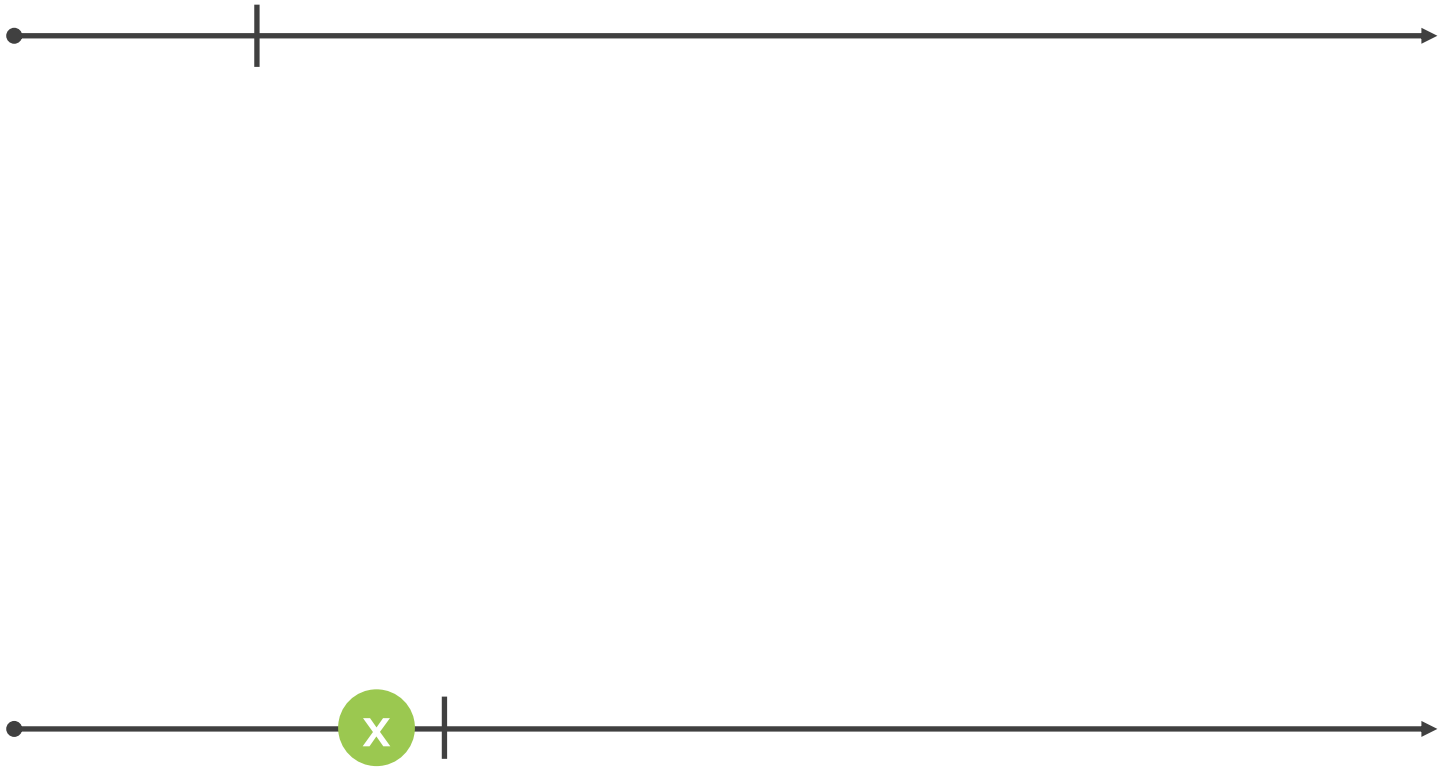
Subscribe when notified

Emit combined results



defaultIfEmpty

Default Value

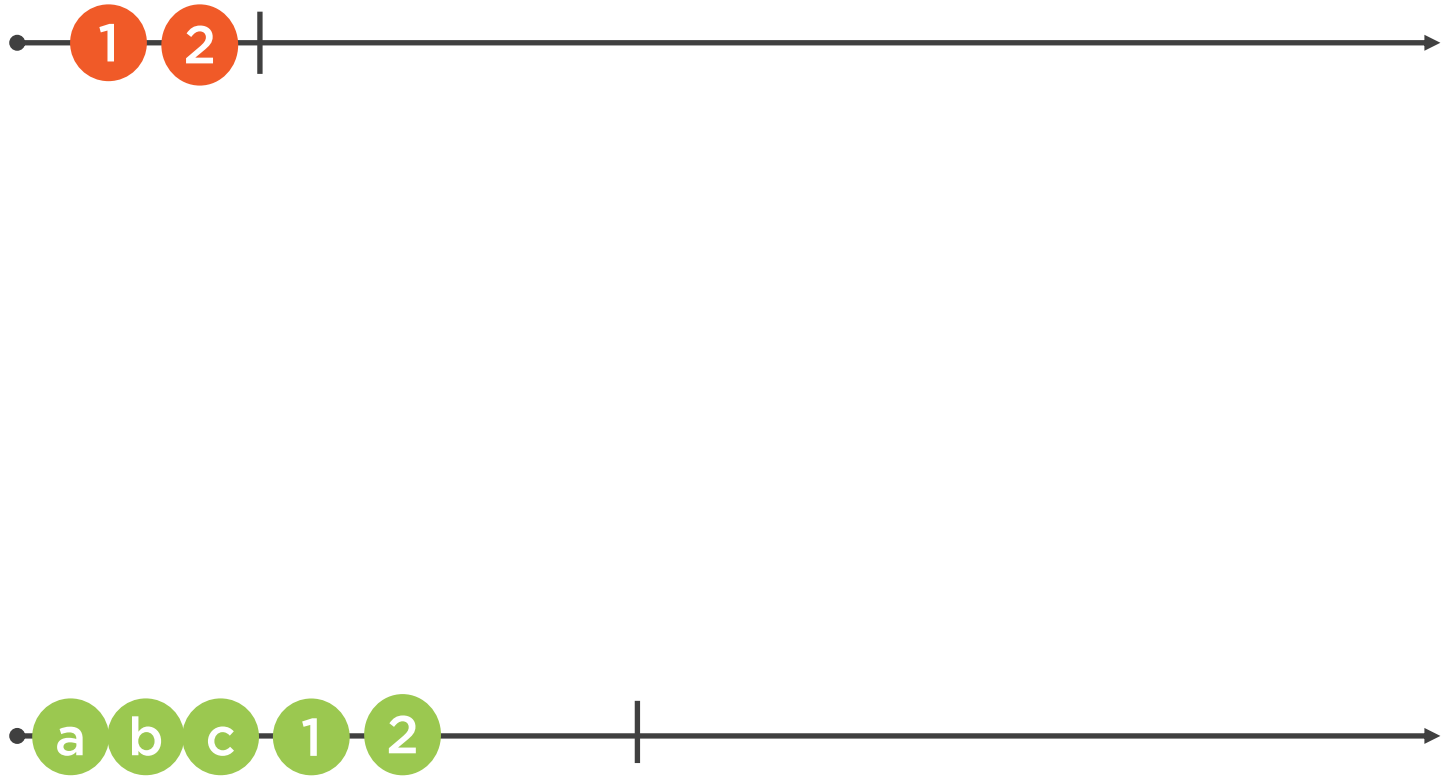


endWith

Append values

startWith

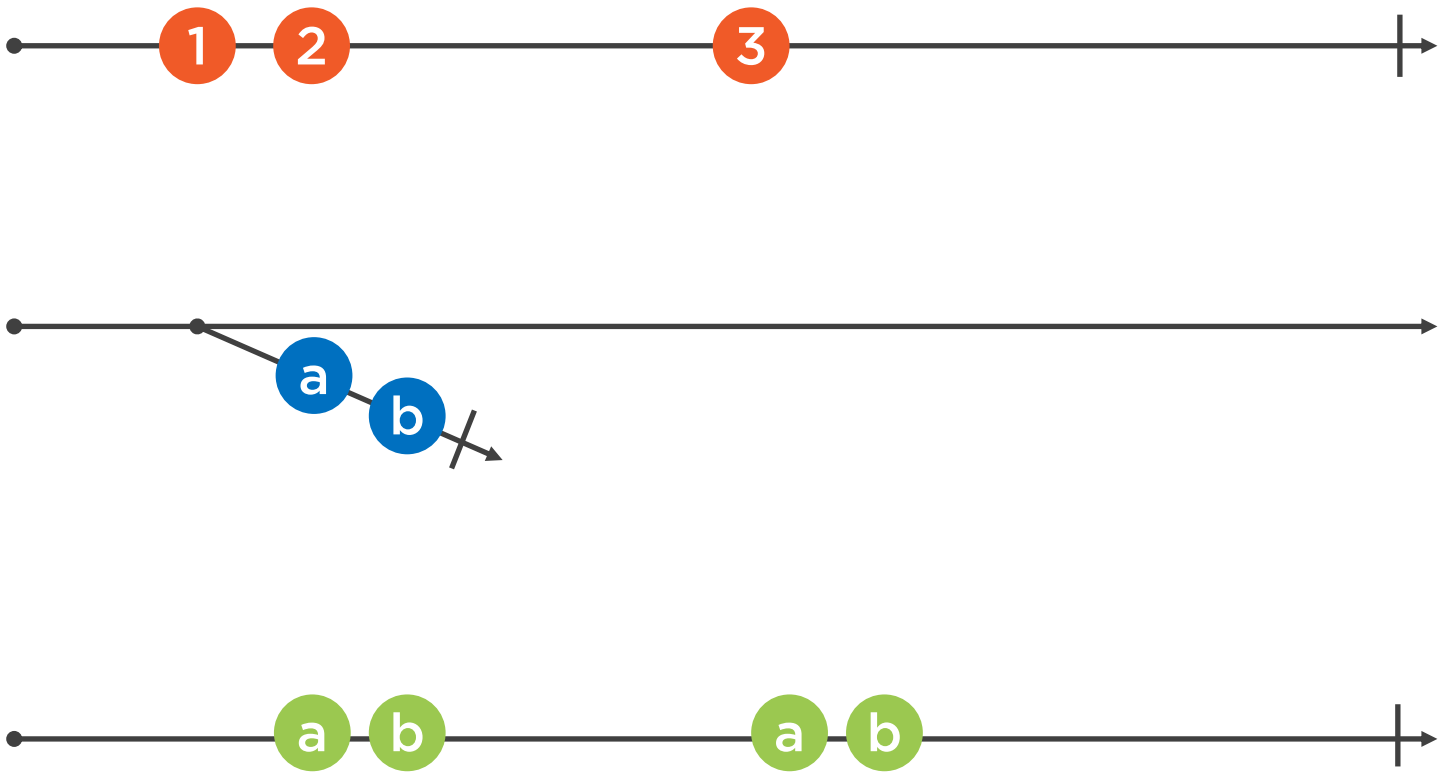
Prepend values



exhaustMap

Map values to generated Observables

Emit results



expand

Apply function source values

recursive


```
expand(x => {return x < 5 ? of(x + 1) : empty() ;})
```

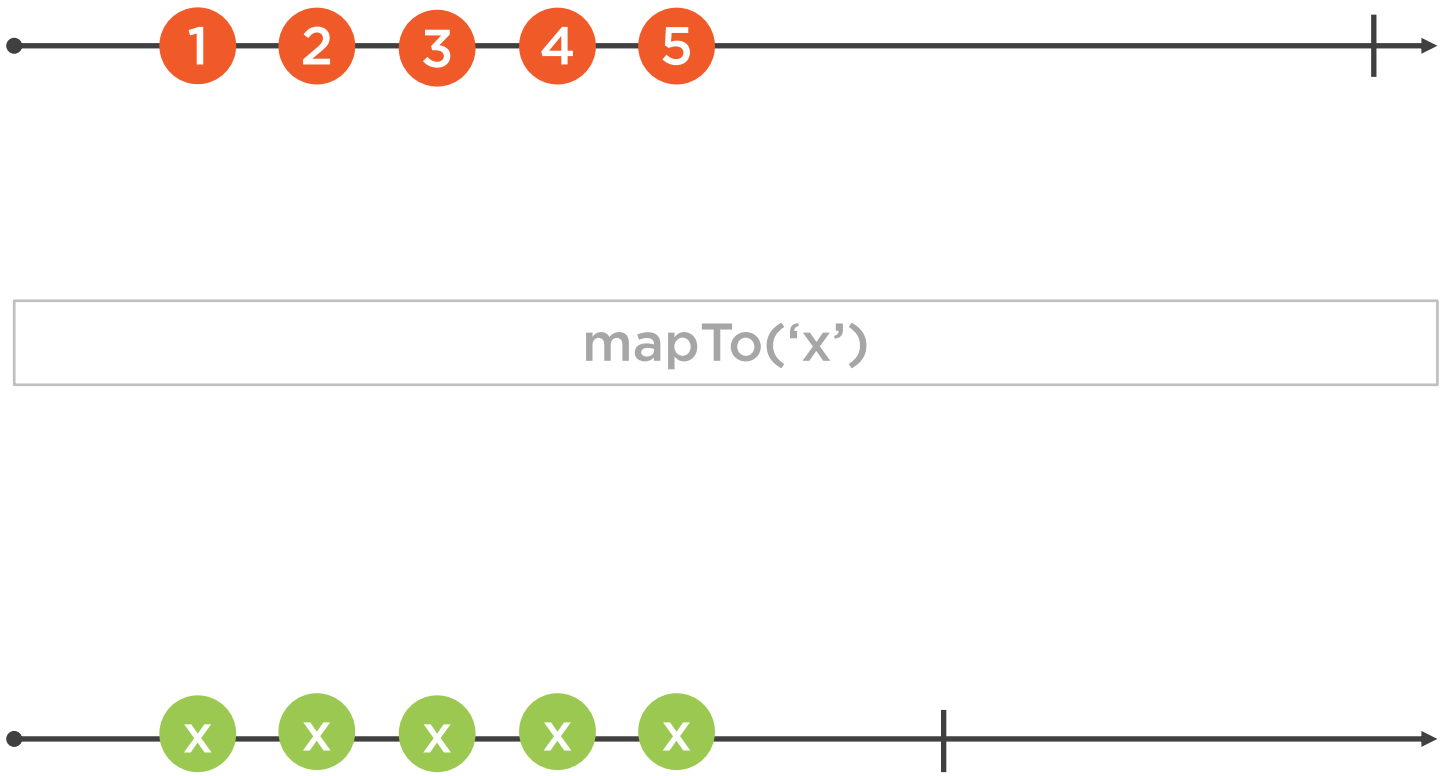
map

Pass all values through a function


```
map(x => x * x)
```

mapTo

Convert every value to same constant



scan

Emit cumulative results


```
scan((acc, val) => acc + val, 0)
```

mergeScan

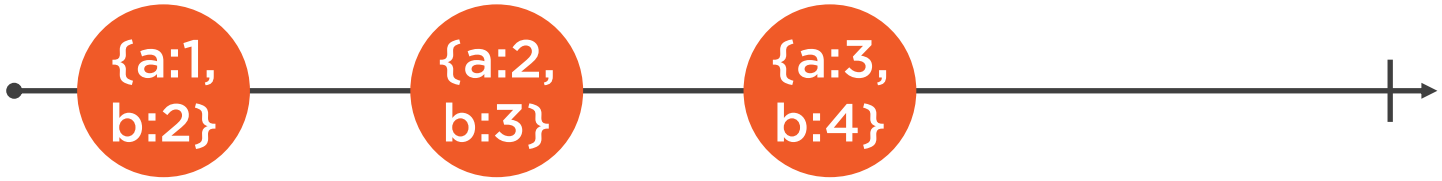
Emit cumulative results

Plus other values


```
mergeScan((acc, val) => of('a', 'b', acc + val), 0)
```

pluck

Pull values from objects



reduce

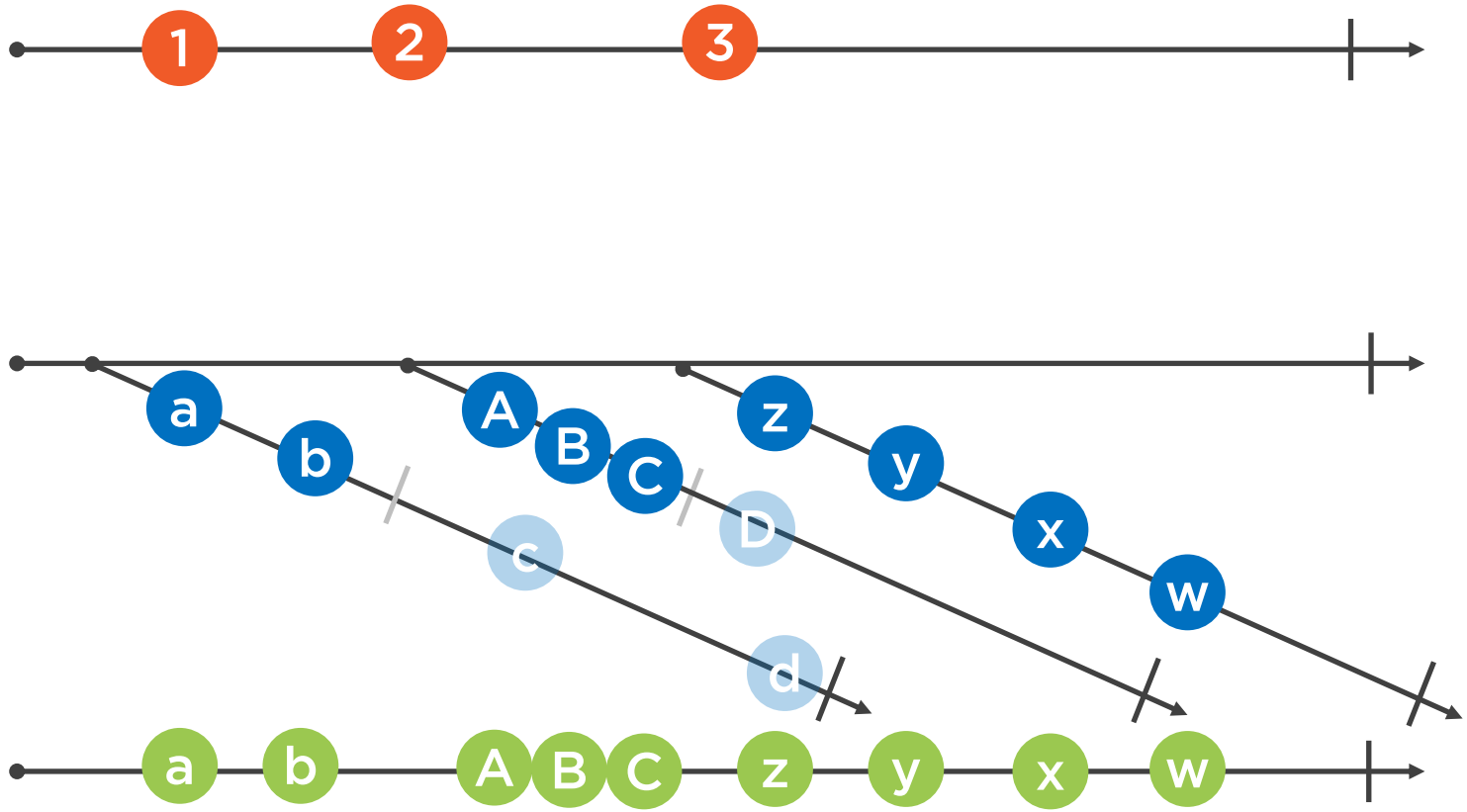
Emit final cumulative result


```
reduce((acc, val) => acc + val, 0)
```

switchMap/flatMap

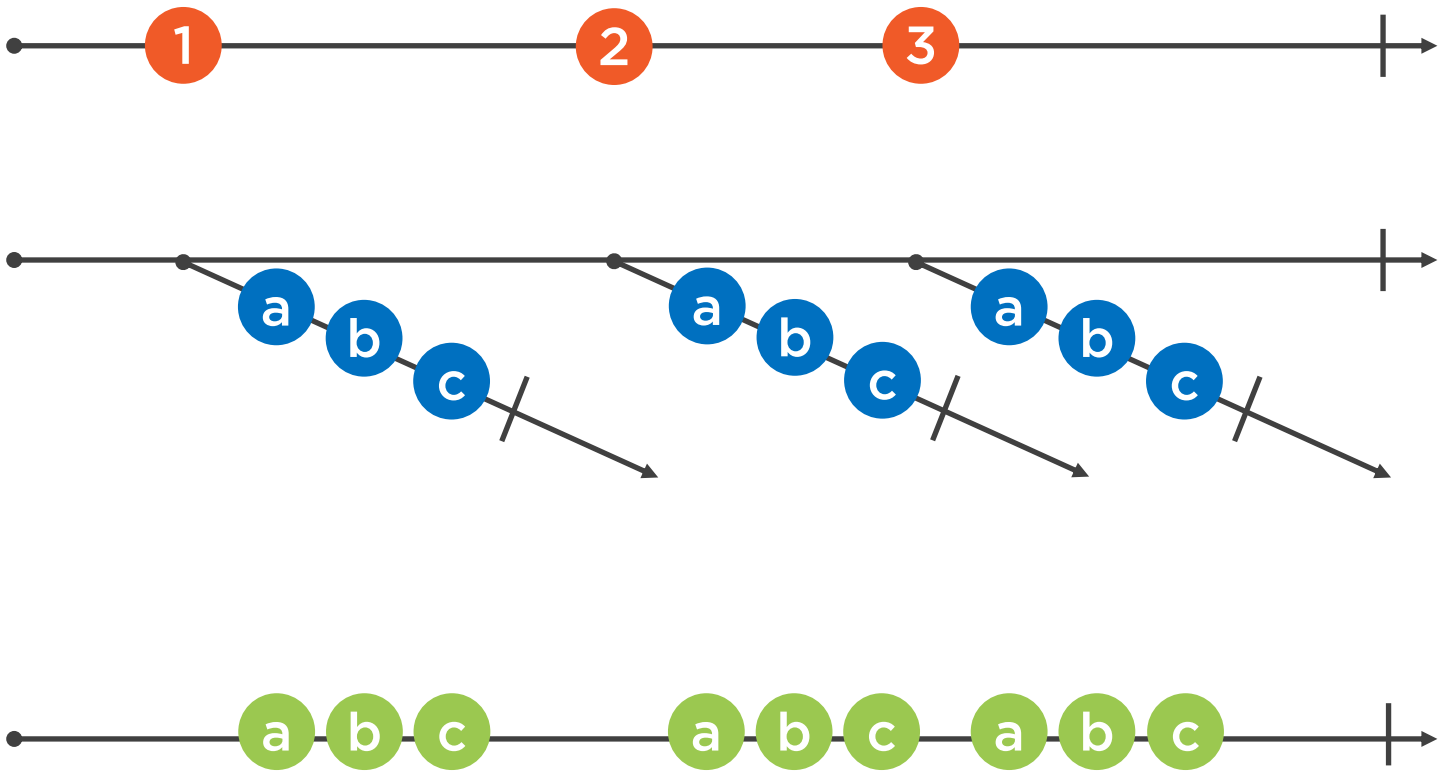
Subscribe to internal Observable when source emits

Cancel previous subscription



mergeMapTo

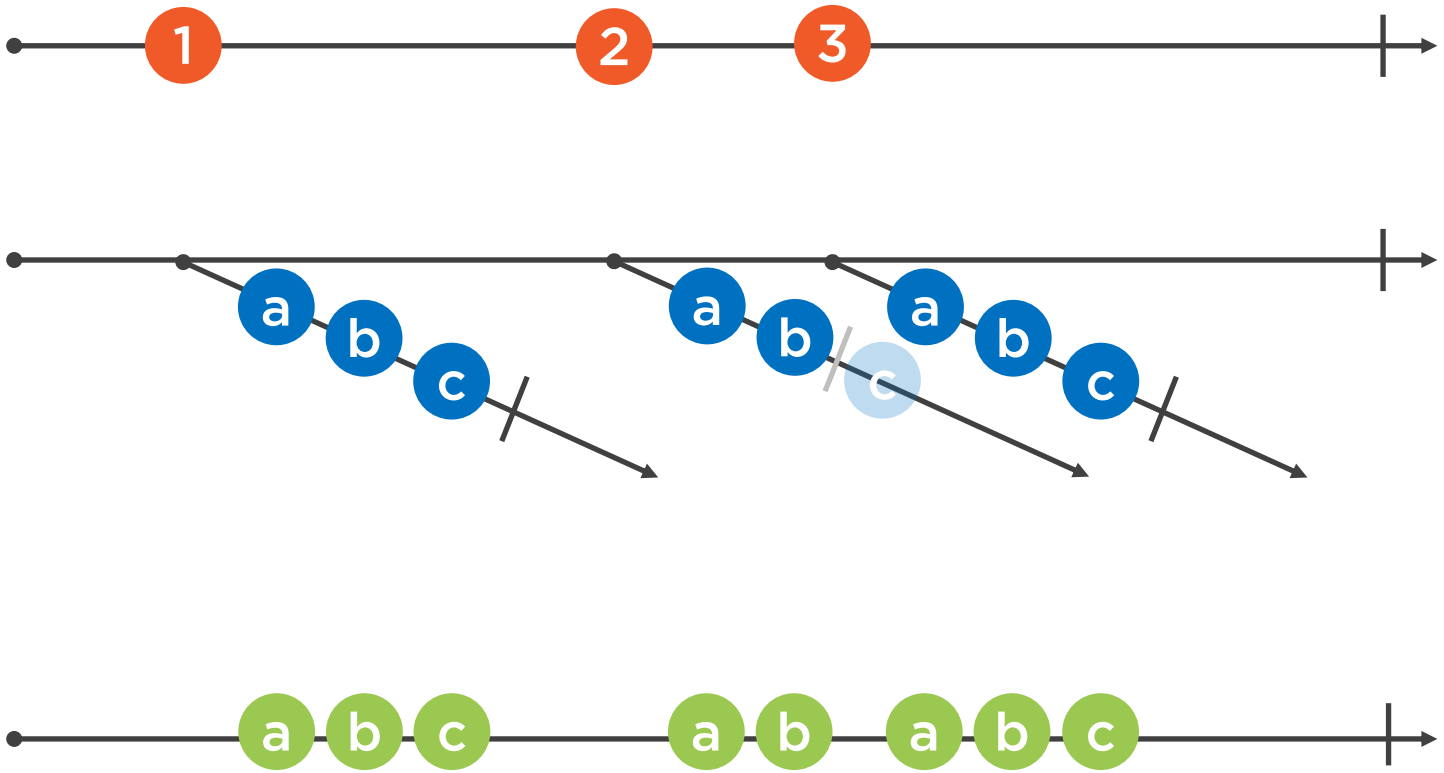
Emit inner Observable
for each source value



switchMapTo

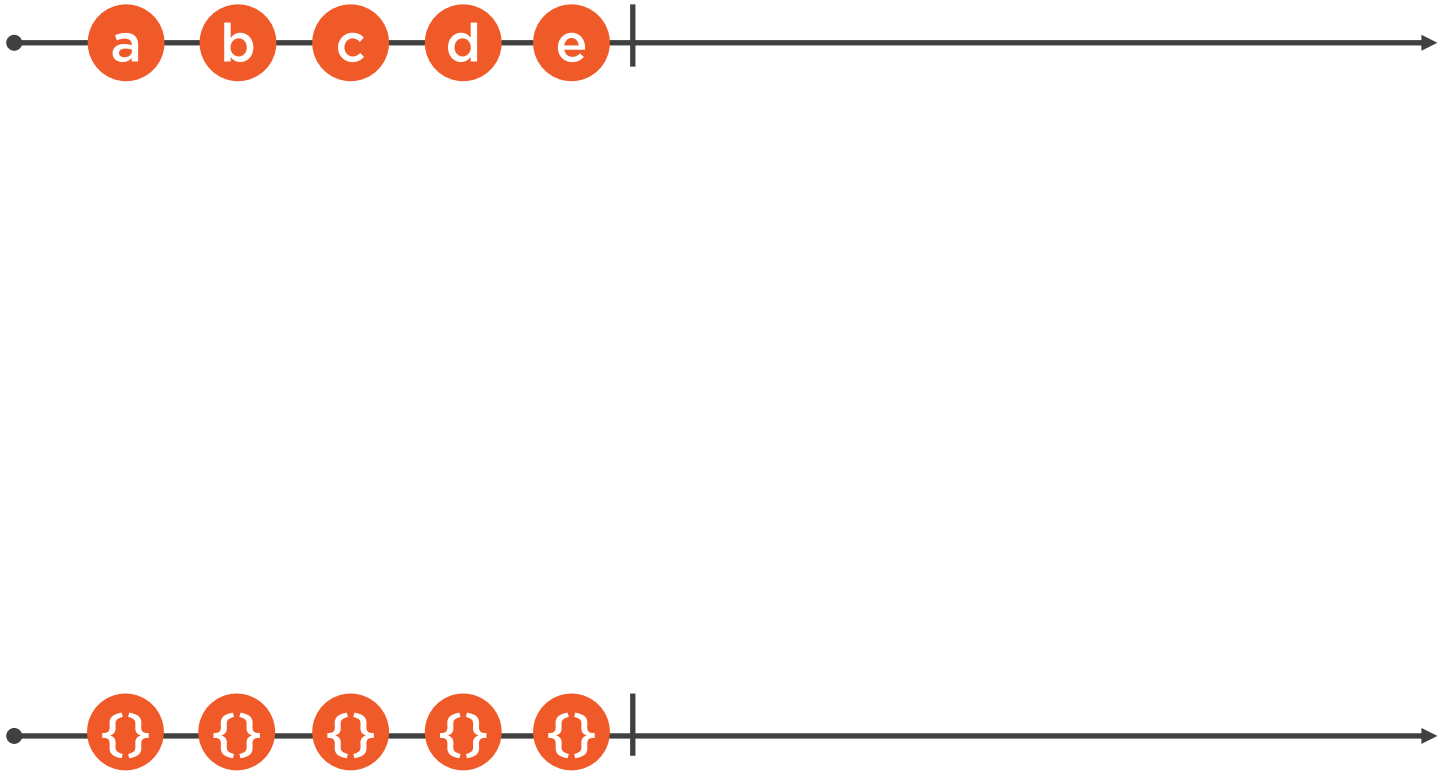
Emit inner Observable for each source value

Cancel previous subscription



materialize

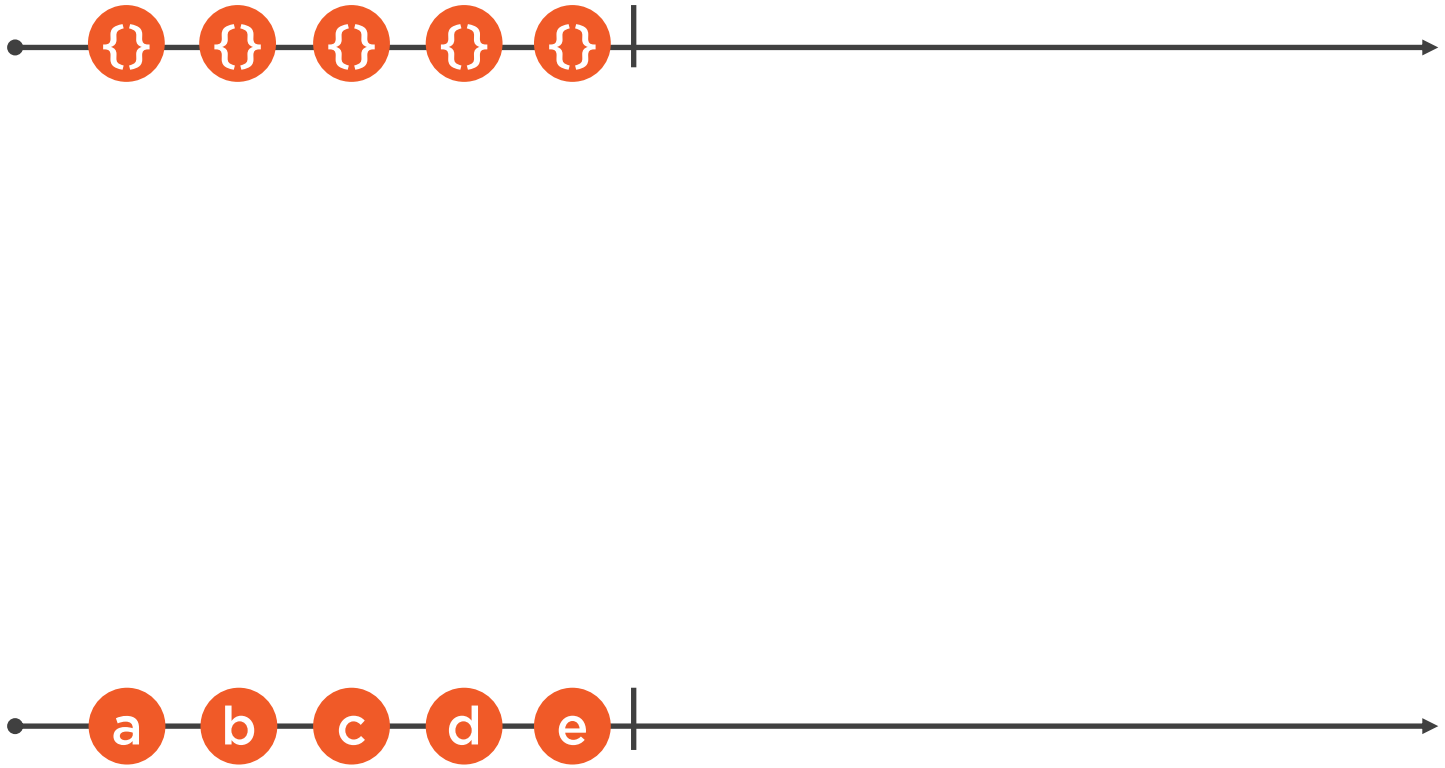
Replace emissions with Notifications



{ kind: 'N', value: *<value>*, error: undefined, hasValue: true }
{ kind: 'C', value: undefined, error: undefined, hasValue:false}
{ kind: 'E', value: undefined, error: *<error contents>*, hasValue:false}

dematerialize

Replace Notifications with standard emissions



{ kind: 'N', value: *<value>*, error: undefined, hasValue: true }
{ kind: 'C', value: undefined, error: undefined, hasValue:false}
{ kind: 'E', value: undefined, error: *<error contents>*, hasValue:false}