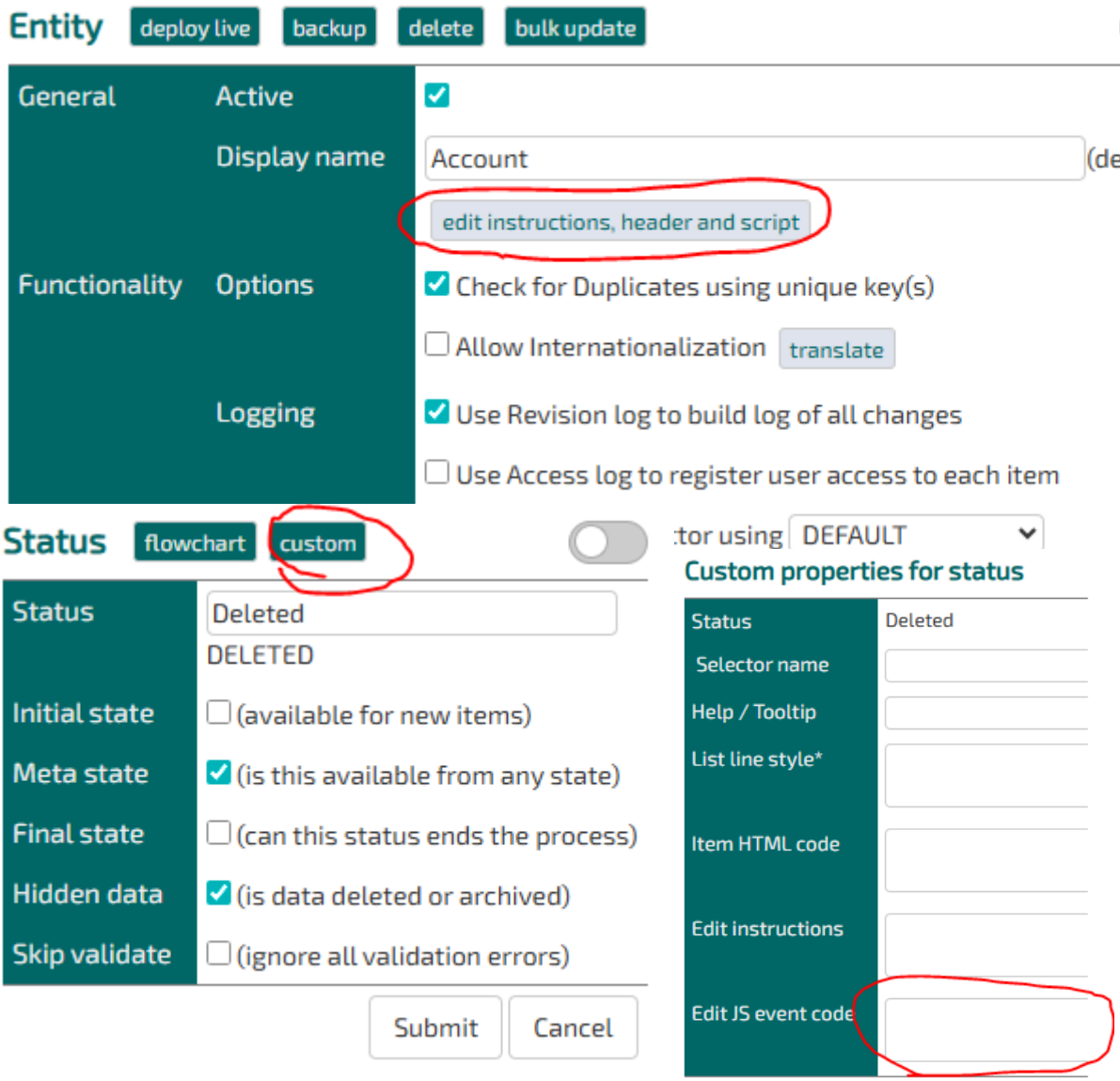
JavaScript functions

Frontend API for tweaking interface behavior

Code placement

The following places can contain JS code

- Entity header
- Entity status
- JavaScript field



Additionally HTML with inline script can be placed in

- Wrapper
- Template

Finally expressions can be evaluated using

- Entity field dependency

Built-in functions

The following functions are only available for single item views (edit or show).

Get and set values

Display values are handled using standard getter and setters

- **getValue(fieldName)**
- **setValue(fieldName,value)**

Example

```
let a = getValue("NUMBER1");
let b = getValue("NUMBER2");
setValue( "RESULT", (a-b) );
```

For explicitly getting a value (or ID) use

- **getDecimal(fieldName)**

Example

```
let recordId = getDecimal("SELECTRECORD");
```

For explicitly getting a datetime use

- **getFieldTime(fieldName)**

Example

```
const time = new Date(getFieldTime('DEADLINE'));
```

Toggling fields (5478+)

Note: Hide functions are NOT intended for denying access to data -it will only be hidden in the frontend, but is still accessible to savvy users.

Fields can be shown or hidden calling the fieldname

- **hideField(fieldName)**
- **showField(fieldName)**

Examples

```
hideField("USER");
hideField("StatusID");
```

Dependent toggling

Hiding and showing fields can be made dependent on classes in the TempusServaPage

- **hideFieldForPageClass(fieldName,className)**
- **showFieldForPageClass(fieldName,className)**

Hiding and showing fields can be made dependent on items current status.

- **hideFieldForStatusId(fieldName,statusId)**
- **showFieldForStatusId(fieldName,statusId)**

Hiding and showing fields can be made dependent on classes in the TempusServaPage AND items current status.

- **hideFieldForPageClassAndStatusId(fieldName,className,statusId)**
- **showFieldForPageClassAndStatusId(fieldName,className,statusId)**

In case of advanced setup consider "hide for all first and show for some later". In this example NAME should only be displayed for a few status

```
hideField("NAME");
showFieldForStatusId("NAME",1234);
showFieldForStatusId("NAME",1235);
```

Disclaimer

The functions are the equivilant of JQuery

```
$("#VB_DATA_"+fieldName).parent().parent().hide();
$("#VB_DATA_"+fieldName).parent().parent().hide();
```

This means that fields are expected to be wrapped in TWO layers of html tags for the functions to work

Toggling status

You can use a Jquery expression.

```
$("#DATA_StatusID option[value='123']").remove();
```

Binding to events (6734+)

The platform sends out events when a couple of events are performed. Code can be written to bind to these.

Events

- `hide-field`, triggered when the platform hides a field (dependency or hideField-function)
- `show-field`, triggered when the platform shows a field (dependency or showField-function)

How to bind

```
$("tr").bind("hide-field", function(e) {
    // Do stuff..
})
```

Custom events

TS implements a couple of custom events, that you can bind your `headers and scripts` to.

Preparing Submit

When the platform i preparing to submit the form, first it fires the event `TS_PrepareSubmitForm` on `#TempusServaPage`.
You can bind to this event like this:

```
$('#TempusServaPage').on('TS_PrepareSubmitForm', () => {
  console.log('Preparing submit!')
})
```

Dynamic reload of fields

If the policy `reloadParentFieldsOnClose` is enabled (as of version 11355) when a child-record is submittet, the parent record i no longer reloaded, instead a reload is performed in the background, and the child-fields are replaced.
Once this task is performed the platform fires the event `TS_RefreshFieldsFromServer` on `#TempusServaPage`.
You can bind to this event like this:

```
$('#TempusServaPage').on('TS_RefreshFieldsFromServer', () => {
  console.log('child was submitted!')
})
```

Value dependencies

Using lookup select boxes you can set up complex dependencies between values. The target field will be filtered when the page loads and on all changes to the filter field(s).

Single dependency

```
lookupValueFilterOnChange(fieldNameTarget, fieldNameSource, tripleArrayOfConditions);
```

```
var conditions = [
  [ TargetValue, SourceValue ... ],
];
```

```
var conditions = [
  ["Ding", "Foo"],
  ["Dong", "Foo"],
  ["Ding", "Bar"],
];
lookupValueFilterOnChange("LOOKUP", "FILTER", conditions);
```

In the above "Ding" and "Dong" will be available to select when FILTER = "Foo"

Double dependency

```
lookupValueFilterDoubleOnChange(fieldNameTarget, fieldNameSource1, fieldNameSource2,
tripleArrayOfConditions);
```

```
var conditions = [
  ["Ding", "Foo", "Cat"],
  ["Dong", "Foo", "Dog"],
  ["Ding", "Bar", "Cat"],
  ["Dong", "Bar", "Fish"],
];
lookupValueFilterDoubleOnChange("LOOKUP", "FILTERA", "FILTERB", conditions);
```

In the above "Ding" will be available to select when either :

- FILTERA = "Foo" -AND- FilterB = "Cat"
- FILTERA = "Bar" -AND- FilterB = "Cat"

Value triggers

Value triggers will make things happen when a field changes. Multiple triggers can be assigned to the same field.

- **setValueOnChange(sourceName,targetName,targetValue)**
- **setValueOnSetValue(sourceName,sourceValue,targetName,targetValue)**

Sets the value if another field is changed. Optionally only if a ceratain value is selected (sourceValue)

```
setValueOnChange("CATEGORY","Silver","StatusID","Customer changed")
```

- **warningOnChange(sourceName,message)**
- **warningOnSetValue(sourceName,sourceValue,message)**

Display a warning to a user if another field is changed. Optionally only if a ceratain value is selected (sourceValue)

Value lookups

Value lookups will copy values from other records to the current one. The normal usecase is records referring other records via parent references.

- **getValueFromLookup(SourceSagID,SourceDataID,FieldNameSource)**
- **setValueFromLookup(SourceSagID,SourceDataID,FieldNameSource,FieldNameTarget)**

The function will

1. Make a call to ?SagID=*[SagID]*&DataID=*[DataID]*&command=show
2. Pickup the value in the page at #VB_DATA_*[FieldNameSource]*
3. Insert the value in the local field *FieldNameTarget*

The DataID on the remote record can be picked up automatically by specifying FieldNameTrigger. Note this will only work as long as the trigger field is in editable and the value is changed.

- **setValueFromLookupTriggered(FieldNameTrigger,SourceSagID,FieldNameSource,FieldNameTarget)**

The function will

1. Extract the DataID form the field *FieldNameTrigger*
2. Same as above

Named queries

You can add peprared statements configurations and make paramterized class to them

- **lookupNamedQuery(query,value)**

The query must be stored under the name: "NamedQueryLookup" + query

The value will be inserted into the ? parameter an escaped properly

```
SELECT CVR FROM data_company WHERE NAME = ?
```

If call is made from an entity the Query will be stored in either

- Entity configuration
- System configuration

Example

In the following example we want to look up a phone number from an email value in the entity 'company'.

Client code

Somewhere in a Javascript the following code is found

```
var email = getValue("EMAIL");
setValue("PHONE",
    lookupNamedQuery("FindPhoneFromEmail", email)
);
```

Server code

In the configuration **NamedQueryLookup.FindPhoneFromEmail** the following SQL is stored

```
SELECT COMPANYPHONE FROM data_company WHERE COMPANYEMAIL = ?
```

Inspect command and users

The currect command can be examined using

- **isCommandNew()**
- **isCommandEdit()**
- **isCommandList()**

Note that commands are allways added as a class to the #TempusServaPage element

```
<div id="TempusServaPage" class="TempusServaPage listCommand da_DK">
```

User types can be determined using

- **isUserAdmin()**
- **isUserExternal()**
- **isUserNormal()**
- **isUserExclusive()** (from version 6248)

Note that special roles are allways added as a class to the #TempusServaPage element

```
<div id="TempusServaPage" class="TempusServaPage IsAdministrator listCommand da_DK">
```

This allows for custom CSS for special roles

```
.IsAdministrator h1 { color: red; }
```

Other functions

selectSingleOption(fieldName)

Will set a value if only one option is avaiable in a select box.

warnDateAfterOtherDate(dateA, dateZ, message)

Alerts the user via a popup, if two dates are not after each other. Both date changes triggers the test.

disableErrorCountInTitle() and enableErrorCountInTitle() (6734+)

Will disable/enable displaying of numbers of errors i the page-title. Default is enabled

changeFieldToShow(fieldName)

Remove input and select boxes and replace them with the value in the field

showMoreTableRows(fieldName,rowsShown,buttonLabel)

Makes a nested table shorter by hiding lines > rowsShown. Hidden rows can be shown with the button below the table.

Adding a QR/Barcode scanner to a field

It is possible to add barcode/qr code scanner functionality to a field, as of version 11819.
To do this, add the following snippit to the headers and scripts for the given entity and adjust accordingly.

```
<script type="text/javascript" src="node_modules/html5-qrcode/html5-qrcode.min.js?2.3.8"></script>
<script type="text/javascript" src="script/qr.js"></script>
<script type="text/javascript">
  $(() => {
    enableScanner("[FIELD SYSTEM NAME]")
    // Alternative, if it is allowed to change the field value manually
    enableScanner("[FIELD SYSTEM NAME]", {readonly = false})
  })
</script>
```

Supported barcode/qrcode formats: https://scanapp.org/html5-qrcode-docs/docs/supported_code_formats

Control variables

TS uses a number of special variables to control the behavior of the frontend. These variables can be changed anywhere.

Opening new windows

Window default sizes are controlled by the following variables

- **tsOpenWindowHeight** = 680;
- **tsOpenWindowWidth** = 820;

Dependency hiding fields

hideTableRowsForElements is by default true.

Set to false if template structure is only in a single level.

- true: Hide two parent nodes when hiding fields
- false: Hide single parent node when hiding fields

Example of 2 level template (default)

```
<tr>
  <td>
    <input ..
```

Example of 1 level template (special cases)

```
<div>
  <input ..
```

Hacking dependent values

The following article is subject to change during 2020: The functions **lookupBuilderShowAll** and **lookupBuilderFilter** will probably become a part of the standard TS javascript library.

Example: Show all sub categories for a distinct main value

In the following the field CAT2 will display all possible categories, if the field CAT has the value "alle"

```
$("#DATA_CAT1").on('change', function() {
  if(  getValue("CAT1") == "alle" )
     lookupBuilderShowAll("DATA_CAT2");
});
```

```
/* remove function after next update after 2020-01-08 */
function lookupBuilderShowAll(dependantField) {
  var selectTo = document.getElementById(dependantField);
  var selectToValue = selectTo[selectTo.selectedIndex].value;
  var optionList = masterOptionContainer[dependantField];
  var optionListLength = optionList.length;
  var optionCount = 0;
  selectTo.options[0] = new Option( "", "" );
  for( var i=0; i < optionListLength; i++ )
  {
     var optionItem = optionList[i];
     var dependID = optionItem["dependID"];
     optionCount++;
     selectTo.options[optionCount] = new Option( optionItem["itemValue"], optionItem["itemID"]);
     if( selectToValue == optionItem["itemID"] ) {
           selectTo.options[optionCount].selected = true;
     }
 }
}
```

Example: Filter categories based on value in another field

In the following the field CAT2 will filter out values containing ":", where the value of the field NAVN cannot be found in the category name.

```
$("#DATA_CAT1").on('change', function() {
  if(  getValue("CAT1") == "andet" )
     lookupBuilderFilter("DATA_CAT2",getValue("NAVN"),':');
});
```

```
/* remove function after next update after 2020-01-08 */
function lookupBuilderFilter(dependantField,lookForValue,lookForMarker) {
  var selectTo = document.getElementById(dependantField);
  var selectToOptions = selectTo.options;
  var optionListLength = selectToOptions.length;
  for( var i=0; i < selectToOptions.length; i++ )
  {
     var itemValue = selectToOptions[i].text;
     if( itemValue.indexOf(lookForValue) == -1 && itemValue.indexOf(lookForMarker) > -1 ) {
           console.log("Removing element: " + itemValue );
           console.log("Removing element: " + selectToOptions[i].value );
           selectTo.remove(i);
     }
  }
}
```