

In [72]:

```
import matplotlib.pyplot as plt
import pandas as pd
from math import pi

# Set data
df = pd.DataFrame({
    'SCM': ['Existing System', 'Our Planned System'],
    'Lead Time': [29.7, 25.3],
    'Information Sharing': [25.1, 36.3],
    'Customer \n Demand': [21.1, 35.4],
    #'Integration of \n Automation': [25.6,28.6],
    'Shortage of \n skilled resources': [26.5,18.23],
    #'Cyber security': [30.4,37.7],
    #'Shortage of \n skilled resources': [16.5,9.23],
    'Integration of \n Automation': [25.6,28.6],
    'Forecasting \n Accuracy': [23.6, 38.2],
    'Review \n Period Length': [28.74, 35.34],
    'Increased \n vessel size': [29,32],
    'Port \n operations': [20.8,27.3],
    'Job Cuts': [34.2, 18.5],
    'Cyber security': [30.4,37.7],
    #'Shortage of \n skilled resources': [16.5,9.23],

})

plt.figure(figsize=(11,9))

# ----- PART 1: Create background

# number of variable
categories=list(df)[1:]
N = len(categories)

# What will be the angle of each axis in the plot? (we divide the plot / number of variable)
angles = [n / float(N) * 2 * pi for n in range(N)]
angles += angles[:1]

# Initialise the spider plot
ax = plt.subplot(111, polar=True)

# If you want the first axis to be on top:
ax.set_theta_offset(pi / 2)
ax.set_theta_direction(-1)
plt.title("Radar/Spider Model Impact of Multimodal Integration System", size=19, color='black', y=1.11)

# Draw one axe per variable + add labels labels yet
plt.xticks(angles[:-1], categories, size=13)

# Draw ylabels
ax.set_rlabel_position(0)
plt.yticks([10,20,30], ["10","20","30"], color="black", size=14)
plt.ylim(0,40)

# Setting the background color
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ax.set_facecolor("orange")

# ----- PART 2: Add plots

# Plot each individual = each line of the data
# I don't do a loop, because plotting more than 3 groups makes the chart unreadable

# Ind1
values=df.loc[0].drop('SCM').values.flatten().tolist()
values += values[:1]
ax.plot(angles, values, linewidth=2.5, linestyle='solid', label="Existing System of GO
B")
ax.fill(angles, values, 'b', alpha=0.5)

# Ind2
values=df.loc[1].drop('SCM').values.flatten().tolist()
values += values[:1]
ax.plot(angles, values, linewidth=2.5, linestyle='solid', label="Multimodal Integration
System")
ax.fill(angles, values, 'r', alpha=0.5)

# Add Legend
plt.legend(loc='upper right', bbox_to_anchor=(0.01, 0.999991))

```

Out[72]:

<matplotlib.legend.Legend at 0x1da16715c08>

Radar/Spider Model Impact of Multimodal Integration System

