

Anexo 1: Interfaz inicial para acceso al programa

```
Private Sub Logo_Click()
```

```
End Sub
```

```
Private Sub Timer1_Timer()
```

```
If Mover Then
```

```
    Logo.Left = Logo.Left - 5
```

```
    If Logo.Left <= -300 Then
```

```
        Mover = False
```

```
    End If
```

```
Else
```

```
    Logo.Left = Logo.Left + 5
```

```
    If Logo.Left >= -5 Then
```

```
        Mover = True
```

```
    End If
```

```
End If
```

```
End Sub
```

```
Private Sub TxtPassword_GotFocus()
```

```
SelectAll TxtPassword
```

```
End Sub
```

```
Private Sub TxtPassword_KeyPress(KeyAscii As Integer)
```

```
If KeyAscii = 39 Then
```

```
    KeyAscii = 0
```

```
    Exit Sub
```

```
End If
```

```
If KeyAscii = 13 Then
```

```
    If Len(Trim(TxtUserName.Text)) = 0 Then
```

```
        Command1.SetFocus
```

```
    Else
```

```
        Command1_Click
```

```
    End If
```

```
End If
```

```
End Sub
```

```
Private Sub TxtUserName_GotFocus()
```

```
SelectAll TxtUserName
```

```
End Sub
```

```
Private Sub TxtUserName_KeyPress(KeyAscii As Integer)
```

```
If KeyAscii = 39 Then
```

```
    KeyAscii = 0
```

```
    Exit Sub
```

```
End If
```

```
If KeyAscii = 13 Then
```

```
    If Len(Trim(TxtPassword.Text)) = 0 Then
```

```
        TxtPassword.SetFocus
```

```
    Else
```

```
Command1_Click  
End If  
End If  
End Sub
```



Anexo 2: Programa para gestión de usuarios

```
Private Sub GridA_DbClick()  
If GridA.ApproxCount > 0 Then  
    Me.Tag = GridA.Columns(0).Text  
    TxtNom.Text = GetS("USU_NOMBRE", "Usuarios", "ID_Usuario=" + CStr(Me.Tag))  
    TxtApe.Text = GetS("USU_PASSWORD", "Usuarios", "ID_Usuario=" + CStr(Me.Tag))  
    TxtApe2.Text = TxtApe.Text  
    CboTipo.ListIndex = FindItem(CboTipo, GetS("USU_TIPO", "Usuarios", "ID_Usuario=" +  
CStr(Me.Tag)))  
    CmdG.Caption = "Modificar"  
    CmdE.Enabled = True  
    TxtNom.SetFocus  
End If  
End Sub  
  
Private Sub TxtApe_KeyPress(KeyAscii As Integer)  
If KeyAscii = 39 Then  
    KeyAscii = 0  
End If  
  
End Sub  
  
Private Sub TxtApe2_KeyPress(KeyAscii As Integer)  
If KeyAscii = 39 Then  
    KeyAscii = 0  
End If  
  
End Sub  
  
Private Sub TxtNom_KeyPress(KeyAscii As Integer)  
If KeyAscii = 39 Then  
    KeyAscii = 0  
End If  
End Sub
```

Anexo 3: Selección de base de datos

```
Option Explicit  
Public LStrDB As String
```

```
Private Sub Command1_Click()  
OpenDB  
End Sub
```

```
Private Sub Form_Load()  
CenterWindow Me  
End Sub
```

```
Public Sub OpenDB()  
On Error GoTo Salir
```

```
    LStrDB = ""  
    Cmd.DialogTitle = "Seleccionar el archivo correcto"  
    Cmd.CancelError = True  
    Cmd.Filter = "Archivo de base de datos|*.mdb"  
    Cmd.ShowOpen  
    Dim MiDB As String  
    MiDB = Cmd.FileName  
    If ModFiles.Existe(MiDB) = False Then  
        MsgBox "El archivo seleccionado no existe"  
        End
```

```
    Else  
        LStrDB = MiDB
```

```
    End If  
    Unload Me
```

```
Exit Sub  
Salir:  
End  
End Sub
```

Anexo 4: Inserción de browser dentro del formulario

```
Option Explicit
Private Sub Form_Load()
CenterWindow Me
End Sub
```

```
Private Sub MnuDestino_Click()
Dim f As New FrmDestino
f.Show vbModal
End Sub
```

```
Private Sub MnuDetener_Click()
ID_EVENTO = 0
End Sub
```

```
Private Sub MnuIniciar_Click()
Dim Fec As String
Dim Hor As String
Fec = Format(Date, "dd/MM/yyyy")
Hor = Format(Time, "hh:mm:ss")
ID_EVENTO = Val(GenCod("ID_EVENTO", "EVENTOS"))
e "INSERT INTO EVENTOS VALUES (" & ID_EVENTO & ",CDATE(" & Fec & ")," & Hor &
")"

End Sub
```

```
Private Sub MnuInsert_Click()
Dim f As New FrmInsertar
f.Show , Me
End Sub

Public Sub MAPA_UPDATE()
If GetC("Datos", "LEIDO='N'") = 0 Then Exit Sub
Dim Id As String
Dim LatD As String
Dim LonD As String
Dim LatO As String
Dim LonO As String
Id = GetN("MAX(ID_DATO)", "DATOS", "LEIDO='N'")
e "UPDATE DATOS SET LEIDO='S'"
LatD = GetS("LAT", "DATOS", "ID_DATO=" & Id)
LonD = GetS("LON", "DATOS", "ID_DATO=" & Id)
LatO = GetS("LAT", "DESTINOS", "ID_DESTINO=1")
LonO = GetS("LON", "DESTINOS", "ID_DESTINO=1")
,
SUCESOS_ADD LatO, LonO, LatD, LonD, Id
,
Dim f As String
f = MAPA_CREATE(LatO, LonO, LatD, LonD)
If Len(f) > 0 Then
WebBrowser1.Navigate f
```

```

'WebBrowser1.Refresh
Set GridA.DataSource = GenRS("SELECT FECHA,HORA,DETALLE FROM " & _
"conSUCESOS WHERE ID_EVENTO=" + CStr(ID_EVENTO) + " ORDER BY
ID_SUCESO DESC")
GridA.Columns(0).Width = 1000
GridA.Columns(1).Width = 1000
GridA.Columns(2).Width = 3500
End If
End Sub
Public Sub SUCESOS_ADD(ByVal LaO As String, ByVal LoO As String, _
ByVal LaD As String, ByVal LoD As String, _
ByVal ID_DATO As String)

Dim StrUrl As String
Dim f As String
StrUrl = "http://maps.googleapis.com/maps/api/directions/json?"
StrUrl = StrUrl + "origin=" + LaO + "," + LoO + "&"
StrUrl = StrUrl + "destination=" + LaD + "," + LoD + "&sensor=false"
Me.MousePointer = vbHourglass
f = Descargar(StrUrl)
Me.MousePointer = vbDefault
Dim L18 As String
Dim L22 As String
Dim L25 As String
L18 = ModFiles.GetDistancia(f)
L22 = ModFiles.GetDuracion(f)
Dim IDS As String
Dim s As String
IDS = GenCod("ID_SUCESO", "SUCESOS")
s = "INSERT INTO SUCESOS VALUES (" + IDS + "," + ID_DATO + "," + L18 + " - " + L22
+ ")"
e s
End Sub

Private Sub MnuSalir_Click()
Unload Me
End
End Sub

Private Sub MnuUsuarios_Click()
Dim f As New FrmUsuarios
f.Show vbModal
End Sub

Private Sub TmrGSM_Timer()
If ID_EVENTO > 0 Then
MAPA_UPDATE
End If
End Sub

```

Anexo 5: Programa principal

```
Option Explicit
Public ID_EVENTO As Long
Public MiCn As ADODB.Connection
Public PStrVar1 As String
Public PStrVar2 As String
Public GStrPersonas_Filtro As String
Public GStrEXEPath As String
Public GStrMSG As String
Public GStrUSER_ID As String
Public GStrUSER_Anular As String
Public GStrUSER_Eliminar As String
Public GStrUSER_Precio As String
Public GStrUSER_Tipo As String
Public PStrCN As String
Public PbVALIDADO As Boolean
Public PStrMotivo As String
Public GStrPathDB As String
Public GStrPathDB_Log As String
Public GPIGV As String
Public GPUtil As String
Public GPUtilAct As String
Public GStrFileConfig As String
Public OkCN As String

'-----
'-----

Private Sub Main()
ID_EVENTO = 0
IntentarDeNuevo:
PStrMotivo = ""
PbVALIDADO = False
On Error GoTo Salir
PStrVar1 = ""
PStrVar2 = ""
GStrMSG = "New System"
GStrEXEPath = If(Right(App.Path, 1) = "\", App.Path, App.Path + "\")
Set MiCn = New ADODB.Connection
Dim StrDB As String
Dim StrDB_Log As String
StrDB = "DbSistema.mdb"
StrDB_Log = "DbSistema.ldb"
GStrPathDB = GStrEXEPath + StrDB
GStrPathDB_Log = GStrEXEPath + StrDB_Log
'GoTo LoMismo
'-----
GStrFileConfig = GStrEXEPath + "Config.txt"
If ModFiles.Existe(GStrFileConfig) = False Then
    GoTo CrearEnlace
End If
```

```

Dim StrDBTemp As String
StrDBTemp = ModFiles.GetLinea(GStrFileConfig)
If StrDBTemp = "@" Then
CrearEnlace:
    StrDBTemp = ""
End If
If Len(StrDBTemp) = 0 Then
    If MsgBox("No se ha establecido la conexion con la base de datos, ¿Desea establecerla
ahora?", vbQuestion + vbYesNo) = vbNo Then
        End
        Exit Sub
    Else
        Dim f As New FrmDB
        f.Show vbModal
        If Len(Trim(f.LStrDB)) > 0 Then
            GStrPathDB = f.LStrDB
            If FileTxtW(GStrFileConfig, GStrPathDB) = False Then
                MsgBox "Error al inicializar archivo de configuracion"
                End
                Exit Sub
            End If
        Else
            End
        End If
    End If
Else
    If ModFiles.Existe(StrDBTemp) = False Then
        If MsgBox("El archivo de base de datos " + StrDBTemp + " no existe o ha sido
removido, verifique el estado del sistema servidor, ¿Desea reestablecer el origen de
datos?", vbQuestion + vbYesNo) = vbYes Then
            If ModFiles.Existe(GStrFileConfig) = True Then KillFile GStrFileConfig
            If Len(Dir(GStrFileConfig)) > 0 Then
                MsgBox "Error uno o mas procesos impiden que se restablesca el origen de
datos, reinicie la computadora y vuelva a intentarlo"
                End
            Else
                GoTo IntentarDeNuevo
            End If
        End If
    End
    Exit Sub
Else
    GStrPathDB = StrDBTemp
End If
End If
LoMismo:
'-----
If Len(Dir(GStrPathDB)) = 0 Then
    MsgBox "No se puede encontrar la base de datos en :" + GStrPathDB, vbCritical
    End
End If

```



```

GStrPathDB_Log = Mid(GStrPathDB, 1, Len(GStrPathDB) - 3) + "ldb"
'Procesar copias
Dim StrBackupFECHA As String
Dim StrFecha As String
StrFecha = Format(Date, "dd-MM-yy")
StrBackupFECHA = "@Auto_DbSistema_" + StrFecha + ".mdb"
If Len(Dir(GStrEXEPath + StrBackupFECHA)) = 0 Then
    'FSOCopyFile GStrPathDB, GStrEXEPath + StrBackupFECHA
End If
PStrCN = "Provider = Microsoft.Jet.OLEDB.4.0; Data source = " & GStrPathDB & ";Persist
Security Info=False;JET OLEDB:DATABASE PASSWORD=2586543"
MiCn.Open PStrCN
OkCN = "Provider=Microsoft.Jet.OLEDB.4.0;Data Source=" & GStrPathDB & ";Persist
Security Info=False;Jet OLEDB:Database Password=2586543"
'DataEnvironment1.Connections(1).ConnectionString = OkCN
*****

Call DB_INI
FrmInicio.Show
Exit Sub
Salir:
MsgBox "Error inesperado : " + Chr(13) + Chr(10) + Err.Description, vbCritical
End
End Sub
Public Sub DB_INI()

End Sub
Public Function GenRS(ByVal IpStrSQL As String) As ADODB.Recordset
Dim Rs As ADODB.Recordset
Set Rs = New ADODB.Recordset
Rs.CursorLocation = adUseClient
Rs.Open IpStrSQL, MiCn, adOpenKeyset, adLockOptimistic, adCmdText
Set GenRS = Rs
End Function
Public Function OkRs(ByVal IpRs As ADODB.Recordset) As Boolean
On Error GoTo Salir
If IpRs.BOF = True Or IpRs.EOF = True Then
    OkRs = False
    Exit Function
End If
If IpRs.RecordCount = 0 Then
    OkRs = False
    Exit Function
End If
If IsNull(IpRs.Fields(0).Value) Then
    OkRs = False
    Exit Function
End If
Dim Valor
Valor = IpRs.Fields(0).Value
OkRs = True
Exit Function

```

```

Salir:
    OkRs = False
    Exit Function
End Function
Public Function FormatEx(ByVal lpCampo As ADODB.Field) As String
If lpCampo.Type = adDate Then
    FormatEx = If(IsNull(lpCampo.Value) = True, "01/01/1900", Format(lpCampo.Value,
"dd/mm/yyyy"))
ElseIf lpCampo.Type = 135 Then
    FormatEx = If(IsNull(lpCampo.Value) = True, "01/01/1900", Format(lpCampo.Value,
"dd/mm/yyyy"))
ElseIf lpCampo.Type = adVarChar Or lpCampo.Type = adVarWChar Then
    FormatEx = If(IsNull(lpCampo.Value) = True, "", Trim(lpCampo.Value))
ElseIf lpCampo.Type = adInteger Then
    FormatEx = If(IsNull(lpCampo.Value) = True, "0", CStr(lpCampo.Value))
ElseIf lpCampo.Type = adDouble Then
    FormatEx = If(IsNull(lpCampo.Value) = True, "0", CStr(lpCampo.Value))
End If
End Function
Public Function Ftr(ByVal lpStr As String) As String
Ftr = Trim(UCase(lpStr))
End Function
Public Function EjtCMD(ByVal lpStrSQL As String) As Long
Dim StrSQL As String
Dim r As Long
MiCn.Execute lpStrSQL, r
EjtCMD = r
End Function
Public Function e(ByVal lpStrSQL As String) As Long
Dim StrSQL As String
Dim r As Long
MiCn.Execute lpStrSQL, r
e = r
End Function
Public Sub CenterWindow(ByVal lpFrm As Form)
lpFrm.Top = (Screen.Height - lpFrm.Height) / 2
lpFrm.Left = (Screen.Width - lpFrm.Width) / 2
End Sub
Public Function StrLike(ByVal lpStr As String) As String
Dim MStr As String
MStr = Ftr(lpStr)
If MStr = "TODOS" Or MStr = "TODAS" Or MStr = "AMBOS" Or MStr = "AMBAS" Then
    StrLike = "%"
Else
    StrLike = MStr
End If
End Function
Public Function StrLikeEX(ByVal lpStr As String) As String
Dim MStr As String
MStr = Ftr(lpStr)

```

```

If MStr = "TODOS" Or MStr = "TODAS" Or MStr = "AMBOS" Or MStr = "AMBAS" Or
Len(MStr) = 0 Then
    StrLikeEX = "*"
Else
    StrLikeEX = MStr
End If
End Function
Public Function FindItem(ByVal IpCombo As ComboBox, ByVal IpStr As String) As Long
Dim i As Integer
Dim iPos As Integer
iPos = -1
For i = 0 To IpCombo.ListCount - 1
    If IpStr = Mid(IpCombo.List(i), 1, Len(IpStr)) Then
        iPos = i
        Exit For
    End If
Next
FindItem = iPos
End Function

```

```

Public Function GetData(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String) As String
Dim strSQL As String
Dim Rs As ADODB.Recordset
IpStrCampo = Trim(UCase(IpStrCampo))
If Len(IpStrCondicion) > 0 Then
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If
Set Rs = GenRS(strSQL)
If OkRs(Rs) Then
    GetData = Trim(Rs.Fields(0).Value)
Else
    GetData = ""
End If
End Function

```

```

Public Function GetDataS(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String) As String
'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim strSQL As String
Dim Rs As ADODB.Recordset
If Len(IpStrCondicion) > 0 Then
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If
Set Rs = GenRS(strSQL)
If OkRs(Rs) Then
    GetDataS = Trim(Rs.Fields(0).Value)

```

```

Else
    GetDataS = ""
End If
End Function
Public Function GetS(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String) As String
'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim strSQL As String
Dim Rs As ADODB.Recordset
If Len(IpStrCondicion) > 0 Then
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If
Set Rs = GenRS(strSQL)
If OkRs(Rs) Then
    GetS = Trim(Rs.Fields(0).Value)
Else
    GetS = ""
End If
End Function
Public Function GetDataF(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String) As String
'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim strSQL As String
Dim Rs As ADODB.Recordset
If Len(IpStrCondicion) > 0 Then
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If
Set Rs = GenRS(strSQL)
If OkRs(Rs) Then
    GetDataF = Format(Rs.Fields(0).Value, "dd/MM/yyyy")
Else
    GetDataF = "01/01/1900"
End If
End Function
Public Function GetF(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String) As String
'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim strSQL As String
Dim Rs As ADODB.Recordset
If Len(IpStrCondicion) > 0 Then
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    strSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If

```

```

Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    GetF = Format(Rs.Fields(0).Value, "dd/MM/yyyy")
Else
    GetF = "01/01/1900"
End If
End Function

```

```

Public Function GetDataN(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String) As String

```

```

'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim StrSQL As String
Dim Rs As ADODB.Recordset
If Len(Trim(IpStrCondicion)) > 0 Then
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If
Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    GetDataN = CStr(Rs.Fields(0).Value)
Else
    GetDataN = "0"
End If
End Function

```

```

Public Function GetN(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String) As String

```

```

'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim StrSQL As String
Dim Rs As ADODB.Recordset
If Len(Trim(IpStrCondicion)) > 0 Then
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If
Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    GetN = CStr(Rs.Fields(0).Value)
Else
    GetN = "0"
End If
End Function

```

```

Public Function GetNx(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String) As Double

```

```

'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim StrSQL As String
Dim Rs As ADODB.Recordset
If Len(Trim(IpStrCondicion)) > 0 Then

```

```

    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If
Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    GetNx = Val(Rs.Fields(0).Value)
Else
    GetNx = 0
End If
End Function
Public Function GetC(ByVal IpStrTabla As String, ByVal IpStrCondicion As String) As
Double
'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim StrSQL As String
If Len(Trim(IpStrCondicion)) > 0 Then
    StrSQL = "Select Count(*) From " + IpStrTabla + " Where " + IpStrCondicion
Else
    StrSQL = "Select Count(*) From " + IpStrTabla
End If
'Set Rs = GenRS(StrSQL)
'-----
Dim Rs As ADODB.Recordset
Set Rs = New ADODB.Recordset
Rs.CursorLocation = adUseClient
Rs.Open StrSQL, MiCn, adOpenKeyset, adLockOptimistic, adCmdText
'-----
If OkRs(Rs) Then
    GetC = CDbI(Rs.Fields(0).Value)
Else
    GetC = 0
End If
End Function

Public Function GetCount(ByVal IpStrTabla As String, ByVal IpStrCondicion As String) As
Double
'Nos permite consultar el valor de un determinado campo de una terminada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim StrSQL As String
Dim Rs As ADODB.Recordset
If Len(Trim(IpStrCondicion)) > 0 Then
    StrSQL = "Select Count(*) From " + IpStrTabla + " Where " + IpStrCondicion
Else
    StrSQL = "Select Count(*) From " + IpStrTabla
End If
Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    GetCount = CDbI(Rs.Fields(0).Value)
Else
    GetCount = 0

```

```
End If
End Function
```

```
Public Function GetDataNEX(ByVal IpStrCampo As String, ByVal IpStrTabla As String,
ByVal IpStrCondicion As String) As Double
'Nos permite consultar el valor de un determinado campo de una determinada tabla,
'siempre y cuando cumpla con la condicion especifica
Dim StrSQL As String
Dim Rs As ADODB.Recordset
If Len(IpStrCondicion) > 0 Then
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion
Else
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla
End If
Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    GetDataNEX = Val(Rs.Fields(0).Value)
Else
    GetDataNEX = 0
End If
End Function
```

```
Public Function Insert(ByVal IpStrTabla As String, ByVal IpStrDatos As String) As Long
'Nos permite crear (concatenar) una instruccion INSERT y ejecutarla, asi mismo
'devuelve el numero de registro afectados
Dim StrSQL As String
StrSQL = "Insert Into " + IpStrTabla + " Values (" + IpStrDatos + ")"
Insert = EjtCMD(StrSQL)
End Function
```

```
Public Function UpdateEx(ByVal IpStrTabla As String, ByVal IpStrDatos As String, ByVal
IpStrCondicion As String) As Long
'Nos permite crear (concatenar) una instruccion UPDATE y ejecutarla, asi mismo
'devuelve el numero de registro afectados
Dim StrSQL As String
If Len(IpStrCondicion) > 0 Then
    StrSQL = "Update " + IpStrTabla + " Set " + IpStrDatos + " Where " + IpStrCondicion
Else
    StrSQL = "Update " + IpStrTabla + " Set " + IpStrDatos
End If
UpdateEx = EjtCMD(StrSQL)
End Function
```

```
Public Function Delete(ByVal IpStrTabla As String, ByVal IpStrCondicion As String) As
Long
'Nos permite crear (concatenar) una instruccion DELETE y ejecutarla, asi mismo
'devuelve el numero de registro afectados
Dim StrSQL As String
If Len(IpStrCondicion) > 0 Then
    StrSQL = "Delete From " + IpStrTabla + " Where " + IpStrCondicion
Else
    StrSQL = "Delete From " + IpStrTabla
End If
Delete = EjtCMD(StrSQL)
```

```

End Function
Public Sub ClearFRM(ByVal IpFrm As Form)
Dim Control As Object
On Error Resume Next
For Each Control In IpFrm.Controls
  If Control.Tag <> "X" Then
    Control.Tag = ""
    If Control.TabIndex = 0 Then
      Control.SetFocus
    End If
    If TypeOf Control Is TextBox Then
      If Len(Control.Tag) = 0 Then
        Control.Text = ""
      End If
    ElseIf TypeOf Control Is ComboBox Then
      If Control.ListCount > 0 Then
        Control.ListIndex = 0
      End If
    ElseIf TypeOf Control Is ListBox Then
      Control.Clear
    ElseIf TypeOf Control Is CommandButton Then
      If Control.Name = "CmdGuardar" Then
        Control.Caption = "&Guardar"
        Control.Enabled = True
      ElseIf Control.Name = "CmdEliminar" Then
        Control.Enabled = False
      ElseIf Control.Name = "CmdImprimir" Then
        Control.Enabled = False
      ElseIf Control.Name = "CmdAnular" Then
        Control.Enabled = False
      End If
      If Control.Name = "CmdG" Then
        Control.Caption = "Guardar"
        Control.Enabled = True
      ElseIf Control.Name = "CmdE" Then
        Control.Enabled = False
      ElseIf Control.Name = "CmdI" Then
        Control.Enabled = False
      ElseIf Control.Name = "CmdA" Then
        Control.Enabled = False
      End If
    End If
  End If
End For
Next
IpFrm.Tag = ""
End Sub
Public Sub MiSetFocus(ByVal IpControl As Control)
On Error Resume Next
IpControl.SetFocus
End Sub

```



```

Public Sub FillEx(ByVal IpStrCampo As String, ByVal IpStrTabla As String, ByVal
IpStrCondicion As String, ByVal IpCombo As ComboBox, ByVal IpComodin As Boolean)
Dim StrSQL As String
If Len(IpStrCondicion) = 0 Then
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Order By 1"
Else
    StrSQL = "Select " + IpStrCampo + " From " + IpStrTabla + " Where " + IpStrCondicion +
" Order By 1"
End If
IpCombo.Clear
If IpComodin = True Then IpCombo.AddItem "TODOS"
Dim Rs As ADODB.Recordset
Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    Dim i As Long
    Rs.MoveFirst
    For i = 0 To Rs.RecordCount - 1
        IpCombo.AddItem Trim(Rs.Fields(0).Value)
        Rs.MoveNext
    Next
End If
If IpCombo.ListCount > 0 Then
    IpCombo.ListIndex = 0
End If
End Sub

Public Sub FillExSQL(ByVal IpStrSQL As String, ByVal IpCombo As ComboBox, ByVal
IpComodin As Boolean)
Dim StrSQL As String
StrSQL = IpStrSQL
IpCombo.Clear
If IpComodin = True Then IpCombo.AddItem "TODOS"
Dim Rs As ADODB.Recordset
Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    Dim i As Long
    Rs.MoveFirst
    For i = 0 To Rs.RecordCount - 1
        IpCombo.AddItem Trim(Rs.Fields(0).Value)
        Rs.MoveNext
    Next
End If
If IpCombo.ListCount > 0 Then
    IpCombo.ListIndex = 0
End If
End Sub

Public Function GenCod(ByVal IpStrCampo As String, ByVal IpStrTabla As String) As
String
Dim StrSQL As String
Dim Rs As ADODB.Recordset
StrSQL = "Select MAX(" + IpStrCampo + ") From " + IpStrTabla

```

```

Set Rs = GenRS(StrSQL)
If OkRs(Rs) Then
    Rs.MoveFirst
    If IsNull(Rs.Fields(0).Value) = True Then
        GenCod = "1"
    Else
        GenCod = CStr(Rs.Fields(0).Value + 1)
    End If
Else
    GenCod = "1"
End If
End Function
Public Function fContarCaracteres(ByVal IpStr As String, ByVal IpStrChar As String) As Integer
Dim i As Integer
Dim Cx As Integer
Cx = 0
For i = 1 To Len(IpStr)
    If Mid(IpStr, i, Len(IpStrChar)) = IpStrChar Then
        Cx = Cx + 1
    End If
Next
fContarCaracteres = Cx
End Function
Public Sub SelectAll(ByVal IpTextBox As TextBox)
    On Error Resume Next
    IpTextBox.SelStart = 0
    IpTextBox.SelLength = Len(IpTextBox.Text)
    IpTextBox.SetFocus
End Sub
Public Sub SA(ByVal IpTextBox As TextBox)
    On Error Resume Next
    IpTextBox.SelStart = 0
    IpTextBox.SelLength = Len(IpTextBox.Text)
    IpTextBox.SetFocus
End Sub
Public Function Ok(ByVal IpNumber As Integer) As Integer
If IpNumber < 0 Then
    Ok = 0
Else
    Ok = IpNumber
End If
End Function
Public Function KillSpace(ByVal IpStr As String) As String
Dim i As Integer
Dim NStr As String
NStr = ""
For i = 1 To Len(IpStr)
    If Mid(IpStr, i, 1) <> Space(1) Then
        NStr = NStr + Mid(IpStr, i, 1)
    End If
Next
KillSpace = NStr
End Function

```

```

Next
KillSpace = NStr
End Function
Public Function fEsNumeroEntero(ByVal lpStr As String) As Boolean
Dim StrX As String
Dim i As Integer
Dim StrLetra As String
Dim bOk As Boolean
bOk = True
StrX = lpStr
For i = 1 To Len(StrX)
    StrLetra = Mid(StrX, i, 1)
    If Not (IsNumeric(StrLetra)) Then
        bOk = False
        Exit For
    End If
End For
Next
fEsNumeroEntero = bOk
End Function
Public Sub TextSelect(ByVal lpTextBox As TextBox)
    lpTextBox.SelStart = 0
    lpTextBox.SelLength = Len(lpTextBox)
    lpTextBox.SetFocus
End Sub
Public Sub MSG_GUARDAR_OK()
    MsgBox "Los datos han sido guardados satisfactoriamente", vbInformation, GStrMSG
End Sub
Public Sub MSG_ACTUALIZAR_OK()
    MsgBox "Los datos han sido actualizados satisfactoriamente", vbInformation, GStrMSG
End Sub
Public Function MSG_EstaSeguroQueDeseaEliminar() As Boolean
If MsgBox("¿Esta seguro que desea eliminar el presente registro?", vbYesNo +
vbQuestion) = vbYes Then
    MSG_EstaSeguroQueDeseaEliminar = True
Else
    MSG_EstaSeguroQueDeseaEliminar = False
End If
End Function
Public Function MSG_EstaSeguroQueDeseaAnular() As Boolean
If MsgBox("¿Esta seguro que desea anular el presente registro?", vbYesNo + vbQuestion)
= vbYes Then
    MSG_EstaSeguroQueDeseaAnular = True
Else
    MSG_EstaSeguroQueDeseaAnular = False
End If
End Function
Public Sub MSG_ErrorAlEliminar()
    MsgBox "Se produjo un error al intentar eliminar"
End Sub

```

```

Public Function FSOCopyFile(ByVal LpO As String, ByVal IpD As String) As Boolean
On Error GoTo Salir
Dim FSO As FileSystemObject
Set FSO = New FileSystemObject
FSO.CopyFile LpO, IpD
FSOCopyFile = True
Exit Function
Salir:
FSOCopyFile = False
End Function
Public Sub FGrid(ByVal G As DataGrid, ByVal IpStrSQL As String, ByVal iColHidden As Integer)
Set G.DataSource = GenRS(IpStrSQL)
Dim i As Integer
For i = 0 To iColHidden - 1
    G.Columns(i).Visible = False
    G.Columns(i).Width = 0
Next
G.MarqueeStyle = dbgHighlightRow
End Sub
Public Function LT(ByVal IpStr As String) As Integer
LT = Len(Trim(IpStr))
End Function
Public Function GetMes(ByVal iMes As Integer) As String
Dim m As String
m = ""
If iMes = 1 Then m = "Enero"
If iMes = 2 Then m = "Febrero"
If iMes = 3 Then m = "Marzo"
If iMes = 4 Then m = "Abril"
If iMes = 5 Then m = "Mayo"
If iMes = 6 Then m = "Junio"
If iMes = 7 Then m = "Julio"
If iMes = 8 Then m = "Agosto"
If iMes = 9 Then m = "Septiembre"
If iMes = 10 Then m = "Octubre"
If iMes = 11 Then m = "Noviembre"
If iMes = 12 Then m = "Diciembre"
GetMes = m
End Function
Public Function TTRIM(ByVal IpStr As String) As String
Dim i As Integer
Dim ns As String
ns = ""
For i = 1 To Len(IpStr)
    If Mid(IpStr, i, 1) = Space(1) Then
        ns = Trim(ns) + Space(1)
    Else
        ns = ns + Mid(IpStr, i, 1)
    End If
Next

```

TTRIM = ns
End Function



Módulo de Ingresos
Moneda: Soles

| Q | 1 | 2 | 3 | 4 | 5 |
|---|--------|--------|--------|---------|---------|
| | Mes 12 | Mes 24 | Mes 36 | Mes 48 | Mes 60 |
| # Transceptores | | | | | |
| Stock Inicial | 924 | 1,932 | 2,940 | 3,948 | 4,956 |
| Ingreso Vegetativo | 84 | 84 | 84 | 84 | 84 |
| Stock Final | 1,008 | 2,016 | 3,024 | 4,032 | 5,040 |
| # Paraderos | | | | | |
| Stock Inicial | 99 | 207 | 315 | 423 | 531 |
| Ingreso Vegetativo | 9 | 9 | 9 | 9 | 9 |
| Stock Final | 108 | 216 | 324 | 432 | 540 |
| Vegetativo Transceptores | 84 | | | | |
| Vegetativo Paraderos | 9 | | | | |
| Precio Unitario Tranceptor | 74 | | | | |
| Precio Instalación | 50 | | | | |
| Precio Gestión de Información | 33 | | | | |
| Precio Unitario HW paradero | 700 | | | | |
| Precio de instalación | 220 | | | | |
| Ventas Tranceptores | 6,216 | 6,216 | 6,216 | 6,216 | 6,216 |
| Ventas Servicio Instalación | 4,200 | 4,200 | 4,200 | 4,200 | 4,200 |
| Ventas Gestión Información | 33,264 | 66,528 | 99,792 | 133,056 | 166,320 |
| Ventas por Hardware - Paraderos | 6,300 | 6,300 | 6,300 | 6,300 | 6,300 |
| Ventas Servicio Instalación HW paradero | 1,980 | 1,980 | 1,980 | 1,980 | 1,980 |

| | 1 | 2 | 3 | 4 | 5 |
|--------|---------|---------|-----------|-----------|-----------|
| | Año 1 | Año 2 | Año 3 | Año 4 | Año 5 |
| VENTAS | | | | | |
| | 74,592 | 74,592 | 74,592 | 74,592 | 74,592 |
| | 50,400 | 50,400 | 50,400 | 50,400 | 50,400 |
| | 216,216 | 615,384 | 1,014,552 | 1,413,720 | 1,812,888 |
| | 75,600 | 75,600 | 75,600 | 75,600 | 75,600 |
| | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 |
| | 440,568 | 839,736 | 1,238,904 | 1,638,072 | 2,037,240 |

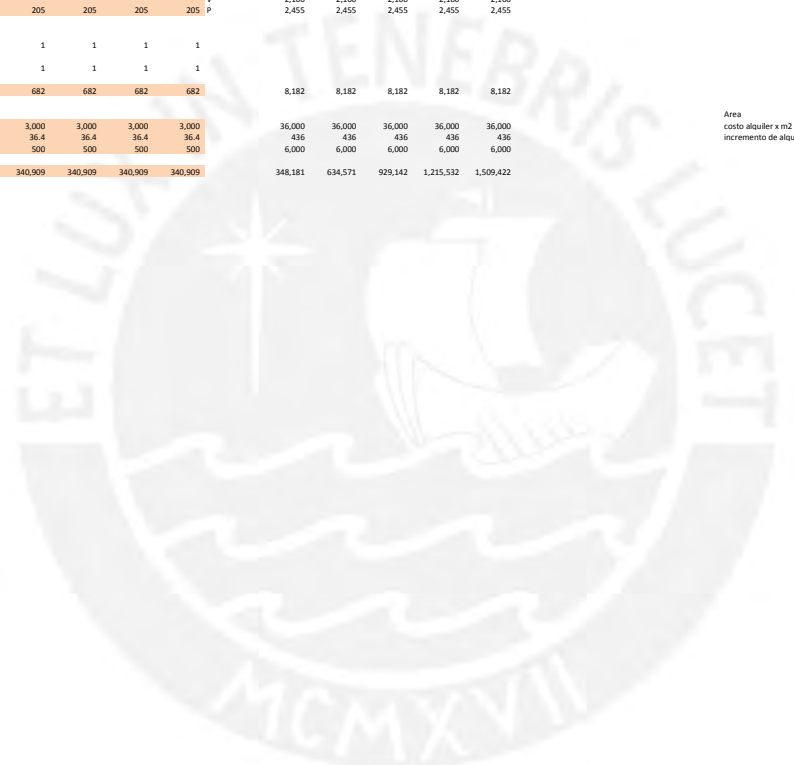
| | 1 | 2 | 3 | 4 | 5 |
|---|-------|--------|--------|--------|--------|
| | Año 1 | Año 2 | Año 3 | Año 4 | Año 5 |
| Q | | | | | |
| | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 |
| | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 |
| | 6,552 | 18,648 | 30,744 | 42,840 | 54,936 |
| | 108 | 108 | 108 | 108 | 108 |
| | 108 | 108 | 108 | 108 | 108 |



| MEO | 2017 | | | | | 2018 | | | | | 2019 | | | | | 2020 | | | | | |
|--------------------|--------------|--------------|---------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|---------------|--------------|--------------|---------------|--------------|--------------|---------------|
| | Transmisión | Integración | Grupos | New Products | New Products | Transmisión | Integración | Grupos | New Products | New Products | Transmisión | Integración | Grupos | New Products | New Products | Transmisión | Integración | Grupos | New Products | New Products | |
| COSTO VARIABLE | 47,576 | 15,133 | 151,056 | 50,760 | 47,576 | 15,133 | 150,904 | 50,760 | 47,576 | 15,133 | 150,712 | 50,760 | 47,576 | 15,133 | 150,520 | 47,576 | 15,133 | 150,328 | 47,576 | 15,133 | 150,136 |
| OTROS CARGOS FIJOS | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 | 8,887 |
| PERSONAL | 5,727 | 16,364 | 8,864 | 2,451 | 5,727 | 16,364 | 8,864 | 2,451 | 5,727 | 16,364 | 8,864 | 2,451 | 5,727 | 16,364 | 8,864 | 5,727 | 16,364 | 8,864 | 5,727 | 16,364 | 8,864 |
| DEPRECIACIÓN | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 |
| TOTAL | 3,228 | 1,114 | 6,068 | 3,268 | 3,228 | 1,114 | 6,068 | 3,268 | 3,228 | 1,114 | 6,068 | 3,268 | 3,228 | 1,114 | 6,068 | 3,228 | 1,114 | 6,068 | 3,228 | 1,114 | 6,068 |
| TOTAL OF CV | 61,897 | 41,500 | 179,227 | 60,814 | 61,897 | 41,500 | 177,792 | 60,814 | 61,897 | 41,500 | 176,366 | 60,814 | 61,897 | 41,500 | 174,930 | 61,897 | 41,500 | 173,494 | 61,897 | 41,500 | 172,058 |
| EMBO | 1,967 | 6,022 | 13,222 | 6,068 | 1,967 | 6,022 | 13,222 | 6,068 | 1,967 | 6,022 | 13,222 | 6,068 | 1,967 | 6,022 | 13,222 | 1,967 | 6,022 | 13,222 | 1,967 | 6,022 | 13,222 |
| O. Anual | 1,008 | 1,008 | 4,512 | 108 | 1,008 | 1,008 | 38,640 | 108 | 1,008 | 1,008 | 36,744 | 108 | 1,008 | 1,008 | 34,848 | 1,008 | 1,008 | 32,952 | 1,008 | 1,008 | 31,056 |
| Variable | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% |
| WARR | 71,150 | 21,400 | 21,400 | 21,400 | 71,150 | 21,400 | 21,400 | 21,400 | 71,150 | 21,400 | 21,400 | 21,400 | 71,150 | 21,400 | 21,400 | 71,150 | 21,400 | 21,400 | 71,150 | 21,400 | 21,400 |
| TOTAL CARGOS | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 | 1,008 |
| COSTO UNIDAD | USD 71 | USD 47 | USD 31 | USD 104 | USD 71 | USD 47 | USD 31 | USD 104 | USD 71 | USD 47 | USD 31 | USD 104 | USD 71 | USD 47 | USD 31 | USD 71 | USD 47 | USD 31 | USD 71 | USD 47 | USD 31 |
| CS UNIDAD | USD 47 | USD 11 | USD 22 | USD 470 | USD 47 | USD 11 | USD 22 | USD 470 | USD 47 | USD 11 | USD 22 | USD 470 | USD 47 | USD 11 | USD 22 | USD 47 | USD 11 | USD 22 | USD 47 | USD 11 | USD 22 |



| Q | 1 | | | | | 1 | 2 | | | | | 3 | 4 | | | | | 5 | | |
|----------------------------------|------------|---------|---------|---------|---------|---------|---------|---------|-----------|-----------|-------|---------------|------|----------------|-----|--|--|---|--|--|
| | Mes 12 | Mes 24 | Mes 36 | Mes 48 | Mes 60 | | Año 1 | Año 2 | Año 3 | Año 4 | Año 5 | | | | | | | | | |
| # Trascceptores | | | | | | | | | | | | | | | | | | | | |
| Stock Inicial | 924 | 1,932 | 2,940 | 3,948 | 4,956 | | | | | | | | | | | | | | | |
| Ingreso Vegetativo | 84 | 84 | 84 | 84 | 84 | | | | | | | | | | | | | | | |
| Stock Final | 1,008 | 2,016 | 3,024 | 4,032 | 5,040 | | | | | | | | | | | | | | | |
| # Paraderos | | | | | | | | | | | | | | | | | | | | |
| Stock Inicial | 99 | 207 | 315 | 423 | 531 | | | | | | | | | | | | | | | |
| Ingreso Vegetativo | 9 | 9 | 9 | 9 | 9 | | | | | | | | | | | | | | | |
| Stock Final | 108 | 216 | 324 | 432 | 540 | | | | | | | | | | | | | | | |
| Vegetativo Trascceptores | 84 | | | | | | | | | | | | | | | | | | | |
| Vegetativo Paraderos | 9 | | | | | | | | | | | | | | | | | | | |
| Trascceptores | USD | | | | | | | | | | | | | | | | | | | |
| Pu Trascceptores | 45 | | | | | 28,224 | 28,224 | 28,224 | 28,224 | 28,224 | cv | x 100 | 45 | POR | 100 | | | | | |
| Costo de importación | 15% | | | | | 4,234 | 4,234 | 4,234 | 4,234 | 4,234 | cv | x Pu | 37 | POR | 300 | | | | | |
| Antenas | 15 | | | | | 15,120 | 15,120 | 15,120 | 15,120 | 15,120 | cv | x Pu | 28 | POR | 500 | | | | | |
| # Operarios Inicial | | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | |
| Incremento | | | | | | | | | | | | | | | | | | | | |
| # Operarios Final | | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | |
| Participación | 70% | | | | | | | | | | | | | | | | | | | |
| Remuneración Total | 477 | 477 | 477 | 477 | 477 | 5,727 | 5,727 | 5,727 | 5,727 | 5,727 | | | | | | | | | | |
| Instalación Trascceptores | | | | | | | | | | | | | | | | | | | | |
| Suministros eléctricos | 15 | 1,260 | 1,260 | 1,260 | 1,260 | 15,120 | 15,120 | 15,120 | 15,120 | 15,120 | cv | | | | | | | | | |
| # Operarios Inicial | | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | |
| Incremento | | | | | | | | | | | | | | | | | | | | |
| # Operarios Final | | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | |
| Remuneración Básica | | | | | | | | | | | | | | | | | | | | |
| Remuneración Total | 1,364 | 1,364 | 1,364 | 1,364 | 1,364 | 16,364 | 16,364 | 16,364 | 16,364 | 16,364 | CF | sueldo | 1500 | | | | | | | |
| | | | | | | | | | | | | Factor social | 1.5 | Tipo de cambio | 3.3 | | | | | |
| Gestión Información | | | | | | | | | | | | | | | | | | | | |
| Plan tarifario | 18 | 18,144 | 36,288 | 54,432 | 72,576 | 117,936 | 335,664 | 553,392 | 771,120 | 988,848 | | | | | | | | | | |
| reportes | 5 | 5,040 | 10,080 | 15,120 | 20,160 | 32,760 | 99,240 | 153,720 | 214,200 | 274,680 | | | | | | | | | | |
| Energía | | | | | | | | | | | | | | | | | | | | |
| # Operarios Inicial | | 1 | 2 | 4 | 5 | | | | | | | | | | | | | | | |
| Incremento | | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | |
| # Operarios Final | | 2 | 3 | 5 | 6 | | | | | | | | | | | | | | | |
| Remuneración Básica | | | | | | | | | | | | | | | | | | | | |
| Remuneración Total | 1,364 | 2,045 | 3,409 | 4,091 | 4,773 | 8,864 | 17,045 | 33,409 | 41,591 | 57,273 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Hardware - Paraderos | USD | | | | | | | | | | | | | | | | | | | |
| Pantallas LCD | 400 | | | | | 43,200 | 43,200 | 43,200 | 43,200 | 43,200 | | | | | | | | | | |
| Dispositivos varios | 50 | | | | | 5,400 | 5,400 | 5,400 | 5,400 | 5,400 | | | | | | | | | | |
| otros | 20 | | | | | 2,160 | 2,160 | 2,160 | 2,160 | 2,160 | | | | | | | | | | |
| personal (participación) | 30% | 205 | 205 | 205 | 205 | 2,455 | 2,455 | 2,455 | 2,455 | 2,455 | | | | | | | | | | |
| Instalación HW paradero | USD | | | | | | | | | | | | | | | | | | | |
| # Operarios Inicial | | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | |
| Incremento | | | | | | | | | | | | | | | | | | | | |
| # Operarios Final | | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | |
| Remuneración Básica | | | | | | | | | | | | | | | | | | | | |
| Remuneración Total | 682 | 682 | 682 | 682 | 682 | 8,182 | 8,182 | 8,182 | 8,182 | 8,182 | | | | | | | | | | |
| Costos Comunes | USD | | | | | | | | | | | | | | | | | | | |
| Alquiler | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 36,000 | 36,000 | 36,000 | 36,000 | 36,000 | | | | | | | | | | |
| Agua | 36 | 36.4 | 36.4 | 36.4 | 36.4 | 436 | 436 | 436 | 436 | 436 | | | | | | | | | | |
| Energía | 500 | 500 | 500 | 500 | 500 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | | | | | | | | | | |
| otros | | | | | | | | | | | | | | | | | | | | |
| | | 340,909 | 340,909 | 340,909 | 340,909 | 348,181 | 634,571 | 929,142 | 1,215,532 | 1,509,422 | | | | | | | | | | |



| | | CANTIDADES | | | | | |
|-----------------|----------------|------------|---|---|----|---|---|
| Inversión | Monto unitario | 0 | 1 | 2 | 3 | 4 | 5 |
| Servidor CPU IT | \$ 2,000.00 | 3 | 1 | 1 | 1 | 1 | 1 |
| Cisco ASA | \$ 1,000.00 | 2 | | | 3 | | |
| switch | \$ 1,800.00 | 2 | | | 3 | | |
| workstations | \$ 1,500.00 | 10 | | | 15 | | |
| monitores | \$ 700.00 | 10 | | | 15 | | |
| gabinete | \$ 600.00 | 3 | | | 2 | | |
| Mobiliario | \$ 10,000.00 | 1 | | | 1 | | |
| Total | | | | | | | |

| | | INVERSIÓN | | | | | |
|-------|----|-----------|----------|----------|-----------|----------|----------|
| | | 0 | 1 | 2 | 3 | 4 | 5 |
| | \$ | 6,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 |
| | \$ | 2,000.00 | - | - | 3,000.00 | - | - |
| | \$ | 3,600.00 | - | - | 5,400.00 | - | - |
| | \$ | 15,000.00 | - | - | 22,500.00 | - | - |
| | \$ | 7,000.00 | - | - | 10,500.00 | - | - |
| | \$ | 1,800.00 | - | - | 1,200.00 | - | - |
| | \$ | 10,000.00 | - | - | 10,000.00 | - | - |
| Total | \$ | 45,400.00 | 2,000.00 | 2,000.00 | 54,600.00 | 2,000.00 | 2,000.00 |

| Cálculo Depreciación | | | | | | | |
|---------------------------|-----|---|-------------|-------------|-------------|-------------|-------------|
| Depreciación | TVU | 0 | 1 | 2 | 3 | 4 | 5 |
| Servidor CPU IT | 10 | | \$ 600.00 | \$ 600.00 | \$ 600.00 | \$ 600.00 | \$ 600.00 |
| | | | | \$ 200.00 | \$ 200.00 | \$ 200.00 | \$ 200.00 |
| | | | | | \$ 200.00 | \$ 200.00 | \$ 200.00 |
| | | | | | | \$ 200.00 | \$ 200.00 |
| | | | | | | | \$ 200.00 |
| Total | | | \$ 600.00 | \$ 800.00 | \$ 1,000.00 | \$ 1,200.00 | \$ 1,400.00 |
| Depreciación Cisco ASA | 3 | | \$ 666.67 | \$ 666.67 | \$ 666.67 | | |
| | | | | | | \$ 1,000.00 | \$ 1,000.00 |
| Total | | | \$ 666.67 | \$ 666.67 | \$ 666.67 | \$ 1,000.00 | \$ 1,000.00 |
| Depreciación switch | 3 | | \$ 1,200.00 | \$ 1,200.00 | \$ 1,200.00 | | |
| | | | | | | \$ 1,800.00 | \$ 1,800.00 |
| Total | | | \$ 1,200.00 | \$ 1,200.00 | \$ 1,200.00 | \$ 1,800.00 | \$ 1,800.00 |
| Depreciación workstations | 3 | | \$ 5,000.00 | \$ 5,000.00 | \$ 5,000.00 | | |
| | | | | | | \$ 7,500.00 | \$ 7,500.00 |
| Total | | | \$ 5,000.00 | \$ 5,000.00 | \$ 5,000.00 | \$ 7,500.00 | \$ 7,500.00 |
| Depreciación monitores | 3 | | \$ 2,333.33 | \$ 2,333.33 | \$ 2,333.33 | | |
| | | | | | | \$ 3,500.00 | \$ 3,500.00 |
| Total | | | \$ 2,333.33 | \$ 2,333.33 | \$ 2,333.33 | \$ 3,500.00 | \$ 3,500.00 |
| Depreciación gabinete | 5 | | \$ 360.00 | \$ 360.00 | \$ 360.00 | \$ 360.00 | \$ 360.00 |
| | | | | | | \$ 240.00 | \$ 240.00 |
| Total | | | \$ 360.00 | \$ 360.00 | \$ 360.00 | \$ 600.00 | \$ 600.00 |
| Depreciación Mobiliario | 5 | | \$ 2,000.00 | \$ 2,000.00 | \$ 2,000.00 | \$ 2,000.00 | \$ 2,000.00 |
| | | | | | | \$ 2,000.00 | \$ 2,000.00 |
| Total | | | \$ 2,000.00 | \$ 2,000.00 | \$ 2,000.00 | \$ 4,000.00 | \$ 4,000.00 |

| Asignación a los servicios | | | | | | |
|----------------------------|----|-----------|-----------|-----------|-----------|-----------|
| | | 1 | 2 | 3 | 4 | 5 |
| Servidor CPU IT | \$ | 600.00 | 800.00 | 1,000.00 | 1,200.00 | 1,400.00 |
| Cisco ASA | \$ | 666.67 | 666.67 | 666.67 | 1,000.00 | 1,000.00 |
| switch | \$ | 1,200.00 | 1,200.00 | 1,200.00 | 1,800.00 | 1,800.00 |
| workstations | \$ | 5,000.00 | 5,000.00 | 5,000.00 | 7,500.00 | 7,500.00 |
| monitores | \$ | 2,333.33 | 2,333.33 | 2,333.33 | 3,500.00 | 3,500.00 |
| gabinete | \$ | 360.00 | 360.00 | 360.00 | 600.00 | 600.00 |
| Mobiliario | \$ | 2,000.00 | 2,000.00 | 2,000.00 | 4,000.00 | 4,000.00 |
| Total | \$ | 12,160.00 | 12,360.00 | 12,560.00 | 19,600.00 | 19,800.00 |

| Transeptores | Instalación | Gestión Información | Harw.Paraderos | Harw.Paraderos Instal. |
|--------------|-------------|---------------------|----------------|------------------------|
| | | | 100% | |
| | | | 100% | |
| | | | 100% | |
| | 20% | 20% | 20% | 20% |
| | 20% | 20% | 20% | 20% |
| | | | 100% | |
| | 20% | 20% | 20% | 20% |

ESTADO DE RESULTADOS PROYECTADO

MONEDA: DÓLARES

| | Año 0 | Año 1 | Año 2 | Año 3 | Año 4 | Año 5 | |
|------------------------------------|-------|----------------|----------------|----------------|----------------|----------------|--------|
| VENTAS | | 440,568 | 839,736 | 1,238,904 | 1,638,072 | 2,037,240 | |
| Costo Variable | | 264,154 | 542,362 | 820,570 | 1,098,778 | 1,376,986 | |
| Margen de Contribución | - | 176,414 | 297,374 | 418,334 | 539,294 | 660,254 | |
| Costos Fijos | - | 109,404 | 129,761 | 158,300 | 185,497 | 213,354 | |
| Personal | | 41,591 | 49,773 | 66,136 | 74,318 | 90,000 | |
| Depreciación | | 12,160 | 12,360 | 12,560 | 19,600 | 19,800 | |
| Otros Costos Fijos | | 55,653 | 67,628 | 79,603 | 91,579 | 103,554 | |
| Utilidad Bruta | - | 67,010 | 167,613 | 260,035 | 353,798 | 446,901 | |
| Personal Adm&Ventas | | 22,028 | 41,987 | 61,945 | 81,904 | 101,862 | 5% |
| Otros Gadm&Ventas | | 13,217 | 25,192 | 37,167 | 49,142 | 61,117 | 3% |
| Utilidad Operativa | - | 53,793 | 142,421 | 222,867 | 304,656 | 385,784 | |
| Utilidad Antes de Impuestos | - | 53,793 | 142,421 | 222,867 | 304,656 | 385,784 | |
| IR | - | 15,869 | 42,014 | 65,746 | 89,873 | 113,806 | 29.50% |
| Participaciones | - | 2,690 | 7,121 | 11,143 | 15,233 | 19,289 | 5% |
| Utilidad Neta | | 35,234 | 93,286 | 145,978 | 199,549 | 252,688 | |

| | | | | | | |
|-------------------------------|---|--------|---------|---------|---------|---------|
| <i>Margen De Contribución</i> | - | 40.04% | 35.41% | 33.77% | 32.92% | 32.41% |
| <i>Margen Bruto</i> | - | 15.21% | 19.96% | 20.99% | 21.60% | 21.94% |
| <i>Margen Operativo</i> | - | 12.21% | 16.96% | 17.99% | 18.60% | 18.94% |
| <i>EBITDA</i> | - | 65,953 | 154,781 | 235,427 | 324,256 | 405,584 |
| <i>Margen EBITDA</i> | - | 14.97% | 18.43% | 19.00% | 19.79% | 19.91% |
| <i>Margen Neto</i> | - | 8.00% | 11.11% | 11.78% | 12.18% | 12.40% |

FLUJO DE EFECTIVO PROYECTADO

MONEDA: DÓLARES

| | Año 0 | Año 1 | Año 2 | Año 3 | Año 4 | Año 5 | |
|-------------------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|-------------------|
| Ingresos Operativos | - | 519,870 | 990,888 | 1,461,907 | 1,932,925 | 2,403,943 | 18% |
| Egresos Operativos | - | 447,104 | 925,229 | 1,311,032 | 1,793,361 | 2,231,317 | |
| Costo Variable | - | 311,701 | 639,987 | 968,272 | 1,296,558 | 1,624,843 | |
| Personal | - | 63,619 | 91,760 | 128,082 | 156,222 | 191,862 | |
| Otros Costos Fijos | - | 65,671 | 79,802 | 93,932 | 108,063 | 122,193 | |
| Otros Gadm&ventas | - | 15,596 | 29,727 | 43,857 | 57,988 | 72,118 | |
| IR | - | 15,869 | 42,014 | 65,746 | 89,873 | 113,806 | |
| Participaciones | - | 2,690 | 7,121 | 11,143 | 15,233 | 19,289 | |
| IGV | - | -28,042 | 34,820 | - | 69,425 | 87,205 | |
| Superávit Comercial | - | 72,766 | 65,659 | 150,874 | 139,564 | 172,626 | |
| Inversiones | -140,217 | -80,863 | -80,863 | -142,931 | -80,863 | -2,360 | |
| Activos | -53,572 | -2,360 | -2,360 | -64,428 | -2,360 | -2,360 | 56.3% |
| Capital de Trabajo | -86,645 | -78,503 | -78,503 | -78,503 | -78,503 | - | |
| Perpetuidad | | | | | | 212,557 | |
| Flujo de Periodo | -140,217 | -8,097 | -15,204 | 7,943 | 58,701 | 382,824 | |
| Caja Inicial | - | -140,217 | -148,314 | -163,518 | -155,575 | -96,873 | |
| Caja Final | -140,217 | -148,314 | -163,518 | -155,575 | -96,873 | 285,950 | |
| DG COBRO | 60 | | | | | | % M- utilidad 12% |
| COK | 16.57% | | | | | | % Castigo P 60% |
| VAN ECONÓMICA | 56,308 | | | | | | |
| TIR ECONÓMICA | 24.50% | | | | | | |
| PRI | | | | | | | |
| MÓDULO DE IMPUESTOS | | | | | | | |
| COBRO DE IGV | - | 79,302 | 151,152 | 223,003 | 294,853 | 366,703 | |
| PAGO DE IGV DE COSTOS | - | 59,944 | 114,333 | 168,721 | 223,110 | 277,498 | |
| PAGO DE IGV DE ACTIVOS | 45,400 | 2,000 | 2,000 | 54,600 | 2,000 | 2,000 | |
| NETO | -45,400 | 17,358 | 34,820 | -319 | 69,743 | 87,205 | |

| | | | | | | |
|----------------------|--------|---------|--------|-----|--------|--------|
| SALDO INICIAL | - | 45,400 | - | - | 319 | - |
| PAGO DE IGV | - | -28,042 | 34,820 | - | 69,425 | 87,205 |
| SALDO FINAL | 45,400 | - | - | 319 | - | - |

BALANCE GENERAL

MONEDA: DÓLARES